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Mercury Content of Fish in the Southern Indian Lake and Issett Reservoirs, Northern Manitoba, before and after Churchill River Diversion

R.A. Bodaly, N.E. Strange and R.J.P. Fudge

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Department of Fisheries and Oceans
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November 1988

Canadian Data Report of Fisheries and Aquatic Sciences No. 706

Fisheries and Oceans Pêches et Océans

Canada

89-01258/

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Fisheries and Aquatic Sciences 706

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by

R.A. Bodaly, N.E. Strange and R.J.P. Fudge

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This is the 25th Data Report
from the Central and Arctic Region, Winnipeg

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Cat. no. Fs 97-13/706E ISSN 0706-6465

Correct citation for this publication is:

Bodaly, R.A., N.E. Strange, and R.J.P. Fudge. 1988. Mercury content of fish in the Southern Indian Lake and Issett reservoirs, northern Manitoba, before and after Churchill River diversion. Can. Data Rep. Fish. Aquat. Sci. 706: v + 59 p.

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ABSTRACT

Bodaly, R.A., N.E. Strange, and R.J.P. Fudge. 1988. Mercury content of fish in the Southern Indian Lake and Issett reservoirs, northern Manitoba, before and after Churchill River diversion. Can. Data Rep. Fish. Aquat. Sci. 706: v + 59 p.

A large amount of data concerning total mercury concentrations in the muscle of large fish is now available, spanning the years 1975 to 1986, for the Southern Indian Lake reservoir and for the upper portion of the Notigi reservoir (Issett Lake). Fork lengths, round weights and total mercury concentrations in muscle are presented for nearly 5000 fish. Arithmetic means, means standardized to pre-determined fork lengths and means adjusted by analysis of covariance are included. Temporal differences are tested by analysis of variance and covariance. Most data are for lake whitefish, walleye and northern pike, but data are also presented for cisco, longnose sucker and burbot. This data base is the longest and most complete record of mercury in fish in a flooded lake ecosystem. It should prove valuable for comparison to other reservoirs and for the construction and testing of models concerning the dynamics of mercury in reservoirs.

Key words: mercury; reservoirs (water); flooding; lake whitefish (Coregonus clupeaformis; walleye (Stizostedion vitreum); northern pike (Esox lucius); cisco (Coregonus artedii, Coregonus nigripinnis); longnose sucker (Catostomus catostomus); bubot (Lota lota).

RÉSUMÉ

Bodaly, R.A., N.E. Strange, and R.J.P. Fudge. 1988. Mercury content of fish in the Southern Indian Lake and Issett reservoirs, northern Manitoba, before and after Churchill River diversion. Can. Data Rep. Fish. Aquat. Sci. 706: v + 59 p.

Il existe maintenant une grande quantité de données concernant les concentrations totales de mercure dans les muscles des grands poissons, pour la période de 1975 à 1986, dans le bassin du lac Sud des Indiens et la partie supérieure du bassin Notigi (lac Issett). Elles contiennent la longueur à la fourche, le poids brut et les concentrations totales de mercure dans les muscles pour près de 5 000 poissons. Sont également comprises des moyennes arithmétiques, des moyennes normalisées des longueurs à la fourche préétablies et des moyennes ajustées à l'aide d'analyses de covariance. Les différences temporelles sont testées par analyse de variance et de covariance. La plupart des données concernent le grand corégone, le doré et le grand brochet, mais on y présente également des données sur le cisco, le meunier rouge et la lotte. Cette base de données est le document le plus long et le plus complet relatif au mercure dans les poissons dans un écosystème de lacs inondés. Il devrait permettre d'établir des comparaisons avec d'autres bassins et de construire et de mettre à l'essai des modèles concernant la dynamique du mercure dans les bassins.

Mots-clés: mercure; bassins (eau); inondation; grand corégone (Coregonus clupeaformis); doré (Stizostedion vitreum); grand brochet (Esox lucius); cisco (Coregonus artedii, Coregonus nigripinnis); meunier rouge (Catostomus catostomus); lotte (Lota lota).

INTRODUCTION

In recent years, there has been increasing attention paid to the problem of elevated concentrations of mercury in fish in newly impounded reservoirs. This problem has now been documented in Canada (Bodaly et al. 1984; Boucher et al. 1985), the United States (Abernathy and Cumbie 1977; Cox et al. 1979), and Finland (Lodenius et al. 1983; Verta et al. 1986). Bodaly and Hecky (1979) and Bodaly et al. (1984) were the first to document actual increases in mercury concentrations in fish from northern Manitoba reservoirs. Similar increases have recently been demonstrated by Abernathy et al. (1985) for a reservoir in South Carolina, and by Boucher et al. (1985) for reservoirs in the James Bay region of Quebec.

It is the purpose of this data report to present muscle mercury concentration data for six species of fish taken from the Southern Indian Lake and Issett reservoirs located in northern Manitoba. This data set spans the years 1975 to 1986 inclusive. Most of these data apply to the period after flooding (1976).

MATERIALS AND METHODS

STUDY AREA

Southern Indian Lake (SIL) is located on the Churchill River in northern Manitoba, at approximately 57°N latitude and 99°W longitude (Fig. 1). SIL was impounded in 1976 to effect the diversion of the Churchill into the Nelson River basin. Issett Lake is located at the headwaters of the Rat River, in the Nelson basin (Fig. 1). Issett Lake was impounded in 1976 by the Notigi control dam and it now receives the diverted Churchill River flow. See Newbury et al. (1984) for details of the Churchill River diversion project.

SAMPLING

Fish were collected from five sites on SIL, South Bay (Area 6), the Channel, Camp 9 (Area 2), Area 4, and Area 5, and from Issett Lake (Fig. 1). Six species of fish were retained at various times for mercury analysis: lake whitefish (Coregonus clupeaformis), walleye (Stizostedion vitreum), northern pike (Esox lucius), cisco (Coregnus artedii) and C. nigripinnis), longnose sucker (Catostomus catostomus), and burbot (Lota lota). Fish were captured using gill nets usually of mesh sizes 8.9, 10.8, and 13.3 cm stretched measure. Sometimes 3.8, 5.1 and 7.0 cm mesh nets were used in conjunction with the larger mesh nets. Fork length (to the nearest mm) and round weight (to the nearest 25 g) were determined for all fish except for some fish captured in 1985. For these fish, missing fork length data were estimated from round weight data by using a log fork length/log round weight linear regression. All previous data from a site were used in the regression for each species. A muscle sample was removed from each fish and stored frozen. Mercury concentrations were determined according to Hendzel and Jamieson (1976).

Mean concentrations of muscle mercury for whitefish, pike and walleye are reported as three values: 1) the arithmetic mean; 2) a standardized mean calculated from the linear regression of log mercury concentration on log fork length for each sample (year and area) at a fixed fork length for each species; and 3) an adjusted mean predicted from the grand mean fork length for all years by the within group linear regression of log mercury concentrations on log fork length in an analysis of covariance model (Dixon and Massey 1969). The following arbitrary fork lengths were utilized in calculating the second mean: 350 mm for whitefish, 400 mm for walleye, and 550 mm for pike. One-way analysis of variance and analysis of covariance were used to test the significance of year-to-year differences in mean mercury concentrations for whitefish, pike and walleye.

ACKNOWLEDGMENTS

Many people assisted with field collections, including M. Treble, N. Barnes, J. Rettie, M. Walker and D. Rystephanuk. Helen Ayles (Metcalf) collected the 1975 pre-impoundment sample. We would especially like to than Mss. P. Jones and M. Hendzel for performing all of the mercury determinations.

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Table 1. Mercury concentration of South Bay whitefish, 1975, 1979-86.

Fish No	1975			1979			1980			1981			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[2] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	390	960	0.12	450	1780	0.35	400	1160	0.36	285	380	0.13	325	575	0.36	390	850	0.15	295	450	0.06	371	850	0.04	361	610	0.07
2	385	940	0.07	320	510	0.16	340	740	0.13	320	530	0.25	250	200	0.21	343	700	0.09	304	425	0.13	444	1450	0.21	354	610	0.08
3	380	1075	0.10	370	760	0.15	370	1000	0.24	370	920	0.16	289	350	0.12	430	1375	0.23	363	825	0.17	431	1329	0.17	450	1640	0.34
4	370	930	0.04	455	1990	0.37	310	485	0.23	275	315	0.04	234	175	0.08	390	1075	0.25	312	500	0.07	310	500	0.04	403	850	0.08
5	170	150	0.04	410	1195	0.41	255	280	0.21	255	280	0.03	315	475	0.10	455	1525	0.29	353	790	0.08	320	550	0.13	412	995	0.16
6	190	175	0.09	375	700	0.14	260	225	0.18	380	920	0.07	278	300	0.05	330	600	0.16	430	1350	0.14	310	500	0.02	385	1070	0.07
7	310	495	0.08	390	1235	0.45	300	400	0.13	300	510	0.06	372	750	0.03	337	600	0.17	320	425	0.18	315	525	0.02	315	430	0.06
8	420	1290	0.08	395	1100	0.32	340	705	0.12	365	920	0.07	347	575	0.04	340	550	0.14	395	1200	0.12	320	550	0.06	294	310	0.09
9	420	1330	0.11	380	910	0.32	345	760	0.13	365	945	0.26	307	450	0.02	295	425	0.18	385	900	0.14	299	450	0.04	348	580	0.04
10	195	180	0.04	420	1330	0.47	380	1090	0.25	345	770	0.20	288	425	-[1]	295	400	0.11	330	475	0.13	315	525	0.08	403	1030	0.21
11	320	560	0.10	410	1325	0.44	305	470	0.35	340	620	0.08	269	300	0.11	355	650	0.14	457	1960	0.21	343	675	0.07	412	1170	0.12
12	410	1195	0.12	430	1590	0.55	330	670	0.04	325	655	0.26	244	225	0.14	300	350	0.23	439	1330	0.22	310	500	0.03	311	450	0.12
13	360	890	0.04	400	1150	0.24	380	1005	0.06	250	245	0.03	320	525	0.05	325	550	0.09	428	1260	0.06	382	925	0.05	315	430	0.07
14	390	975	0.06	400	1290	0.27	295	475	0.17	320	525	0.08	303	545	0.10	390	1050	0.13	373	860	0.19	334	625	0.03	293	360	0.06
15	260	300	0.05	305	450	0.31	330	600	0.27	310	580	0.16	304	450	0.06	295	350	0.14	451	700	0.32	288	400	0.07	317	560	0.13
16	430	1280	0.09	385	1120	0.38	310	370	0.44	355	930	0.23	303	475	0.11	350	600	0.16	424	1340	0.11	315	525	0.10	337	575	0.06
17	370	1150	0.05	340	595	0.05	380	1125	0.17	315	560	0.19	368	825	0.08	380	1000	0.10	418	1290	0.26	282	375	0.01	328	450	0.09
18	285	470	0.04	400	850	0.08	370	955	0.11	345	670	0.06	400	1050	0.11	302	400	0.07	388	925	0.07	288	400	0.03	382	815	0.04
19	250	310	0.06	410	1290	0.55	320	495	0.17	340	640	0.38	368	950	0.21	358	725	0.15	365	810	0.14	288	400	0.19	293	360	0.12
20	315	540	0.03	440	1640	0.39	345	775	0.23	345	800	0.08	365	850	0.16	350	675	0.22	375	760	0.18	310	500	0.04	370	420	0.12
21	265	340	0.07	290	405	0.18				360	900	0.07	340	750	0.18	330	525	0.14	371	820	0.16	347	700	0.04	308	470	0.10
22	355	870	0.05	335	690	0.29				375	1090	0.10	328	550	0.04	385	875	0.12	320	490	0.12	417	1200	0.16	330	710	0.08
23	290	445	0.07	415	1490	0.25				325	615	0.14	362	800	0.14	358	750	0.08	415	1150	0.17	385	950	0.27	382	920	0.03
24	370	815	0.06	340	710	0.40				300	420	0.15	333	550	0.21	300	400	0.06	455	1500	0.34	347	700	0.05	258	260	0.09
25	315	540	0.09	410	950	0.19				365	875	0.26	374	900	0.20	363	775	0.07	305	400	0.13	330	600	0.16	300	390	0.12
26				420	1490	0.33				260	285	0.04	335	500	0.01	390	950	0.22	395	1050	0.29	330	600	0.08	317	470	0.12
27				395	970	0.21							378	900	0.28	375	800	0.13	420	950	0.34	347	700	0.25	300	400	0.14
28				340	560	0.42							384	1000	0.10	355	675	0.16	440	1500	0.28	339	650	0.05	304	400	0.06
29				430	1510	0.37							396	1050	0.15				315	450	0.14	363	800	0.12	372	680	0.10
30				320	605	0.27							356	750	0.14				395	950	0.04	371	850	0.05	344	570	0.13
31													335	600	0.01				405	1000	0.23	320	550	0.08	352	710	0.09
32													296	500	0.01				390	850	0.07	275	350	0.23	379	880	0.10
33													328	550	0.07				315	450	0.09	385	950	0.10	458	1540	0.36
34													330	550	0.16				355	650	0.14	378	900	0.07	367	860	0.12
35													317	500	0.10				405	1100	0.23	261	300	0.10	319	470	0.17
36													290	375	0.04				365	700	0.11	347	700	0.11	297	380	0.09
37													304	450	0.06				375	800	0.08	436	1375	0.21	376	840	0.13
38																			340	550	0.07	371	850	0.05	312	440	0.12
39																						371	850	0.09	325	575	0.16
40																						310	500	0.03	393	1025	0.26
41																						339	650	0.06	378	790	0.13
42																						347	700	0.05	337	540	0.05
43																						281	373	0.04	407	1140	0.24
44																						299	450	0.03	432	1110	0.22
45																						288	400	0.16	324	470	0.16
46																						288	400	0.11	400	1010	0.15
47																						268	325	0.05	300	350	0.06
48																						246	250	0.03	395	870	0.17
49																						261	300	0.25	421	1080	0.20
50																						237	225	0.15	425	1150	0.25

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

[2] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included South Bay whitefish data from all previous years.

Table 2. Mercury concentration of Channel whitefish, 1975, 1978-83, 1985.

Fish No	1975[3]			1978			1979			1980			1981			1982			1983			1985		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	390	960	0.12	315	470	0.18	340	720	0.06	445	1490	0.18	400	1085	0.15	332	560	0.02	497	2900	0.44	412	1050	0.19
2	385	940	0.07	440	1750	0.44	385	1140	0.23	340	775	0.19	360	735	0.33	282	350	0.05	422	1400	0.21	408	1200	0.50
3	380	1075	0.10	445	1845	0.24	255	275	0.04	330	590	0.04	325	585	0.16	294	300	0.06	313	475	0.10	410	1000	0.12
4	370	930	0.04	470	2170	0.27	260	250	0.08	290	360	0.19	410	1200	0.13	284	300	0.16	394	1025	0.21	428	1200	0.21
5	170	150	0.04	465	2055	0.27	245	190	0.07	320	550	0.16	260	295	0.14	250	175	0.12	273	325	<0.01[2]	396	900	0.16
6	190	175	0.09	440	1640	0.35	285	340	0.11	405	1310	0.25	320	540	0.25	450	1600	0.12	355	700	0.08	404	1000	0.35
7	310	495	0.08	435	1530	0.60	200	110	0.15	365	940	0.29	280	360	0.34	-	-	-[1]	398	1075	0.20	400	1050	0.24
8	420	1290	0.08	420	1050	0.06	200	105	0.36	375	985	0.16	410	1235	0.18	-	-	-	271	300	0.06	376	700	0.08
9	420	1330	0.11	390	1060	0.38	185	110	0.27	390	1100	0.37	435	1505	0.29	-	-	-	330	600	0.03	370	450	0.20
10	195	180	0.04	365	735	0.10	370	990	0.36	365	920	0.35	340	700	0.28	-	-	-	414	1100	0.15	436	1300	0.30
11	320	560	0.10	420	1365	0.39	245	225	0.23	280	390	0.17	345	820	0.10	-	-	-	433	1375	0.18	416	1600	0.31
12	410	1195	0.12	425	1415	0.22	450	1640	0.55	270	320	0.21	430	1590	0.20	173	50	-	415	1200	0.08	320	450	0.06
13	360	890	0.04	405	1030	0.06	440	1880	0.55	360	675	0.08	305	455	0.20	292	350	0.12	330	550	0.04	342	700	0.09
14	390	975	0.06	500	2420	0.33	325	560	0.20	255	245	0.21	315	560	0.23	313	375	0.05	413	1225	0.11	320	500	0.03
15	260	300	0.05	420	1270	0.43	365	920	0.22	295	360	0.02	310	440	0.04	359	750	0.07	385	950	0.17	410	1050	0.13
16	430	1280	0.09	455	1765	0.58	395	800	0.08	285	420	0.17	385	1120	0.31	402	875	0.02	359	750	0.26	416	500	0.07
17	370	1150	0.05	375	870	0.13	385	920	0.08	310	480	0.26	290	385	0.24	388	975	0.24	416	1300	0.22	360	700	0.07
18	285	470	0.04				370	930	0.09	290	430	0.04	330	540	0.18	372	650	0.06	383	750	0.25	360	700	0.08
19	250	310	0.06				355	840	0.10	320	560	0.39	330	600	0.19	388	750	0.04	380	800	0.11	490	1950	0.42
20	315	540	0.03				370	830	0.38	280	350	0.20	280	440	0.19	376	725	0.32	392	1050	0.20	352	750	0.03
21	265	340	0.07				380	875	0.38	285	330	0.07	325	620	0.24	298	325	0.09	328	600	0.02	274	350	0.02
22	355	870	0.05				390	1210	0.52	380	1250	0.34	375	975	0.08	243	200	0.05	341	600	0.15	390	1000	0.14
23	290	445	0.07				410	1080	0.06	385	1000	0.21	335	760	0.12	252	225	0.14	399	1075	0.23	400	1100	0.12
24	370	815	0.06				460	1915	0.45	420	1235	0.42	275	330	0.19	271	250	0.04	411	1125	0.08	362	750	0.07
25	315	540	0.09				350	790	0.45				370	930	0.31	374	700	0.06	375	925	0.18	326	500	0.13
26	400	1010	0.04				400	1250	0.35							379	825	0.07	380	800	0.04	292	450	0.04
27	250	225	0.04													379	825	0.06	350	650	0.16	398	1100	0.07
28	375	855	0.04													312	400	0.04	400	1050	0.22	400	1100	0.05
29	450	1255	0.06													343	550	0.05	325	525	<0.01	468	1650	0.25
30	260	280	0.06													374	750	0.05	325	500	0.10	424	1200	0.33
31	240	170	0.04													325	450	0.06	375	700	0.17	362	750	0.03
32	350	680	0.04																385	1000	0.18	336	500	0.06
33	300	305	0.06																375	750	0.16	374	700	0.21
34	285	365	0.04																410	1125	0.30	432	1400	0.25
35	410	960	0.06																			454	1550	0.18
36	315	470	0.05																			342	600	0.06
37	385	1010	0.06																			390	750	0.07
38	370	1000	0.03																			348	550	0.10
39	245	305	0.04																			318	500	0.03
40	180	160	0.04																			320	450	0.03
41	215	220	0.04																			420	1150	0.39
42	360	870	0.05																			400	900	0.14
43	400	1090	0.04																			370	750	0.08
44	480	2110	0.08																			370	650	0.07
45	355	745	0.04																					
46	400	1100	0.04																					
47	345	720	0.05																					
48	310	540	0.04																					
49	360	855	0.04																					
50	345	715	0.04																					

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

[2] Where [Hg] is shown as <0.01, 0.005 is used in calculation of means.

[3] The 1975 sample is actually a combination of South Bay and Camp 9 data.

Table 3. Mercury concentration of Camp 9 whitefish, 1975, 1979-84, 1986.

Fish No	1975			1979			1980			1981			1982			1983			1984			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	400	1010	0.04	380	810	0.06	370	720	0.09	360	820	0.04	444	1500	0.11	375	850	0.09	392	950	0.30	382	710	0.21
2	250	225	0.04	395	930	0.10	390	925	0.16	385	920	0.04	416	1150	0.05	406	1350	0.06	398	1000	0.10	412	1170	0.10
3	375	855	0.04	375	630	0.08	430	1175	0.09	340	660	0.09	385	950	0.04	338	575	0.05	365	650	0.04	420	1050	0.22
4	450	1255	0.06	480	1970	0.24	330	585	0.16	380	990	0.06	390	1000	0.09	298	450	0.01	337	550	0.06	445	1485	0.10
5	260	280	0.06	460	1290	0.13	330	525	0.07	350	715	0.06	370	750	0.07	395	1175	0.04	288	300	0.05	380	950	0.09
6	240	170	0.04	465	1480	0.22	400	980	0.06	355	670	0.07	370	850	0.07	390	1025	0.13	241	200	0.06	383	820	0.08
7	350	680	0.04	385	670	0.15	400	910	0.10	290	500	0.10	417	1150	0.07	413	1450	0.20	226	150	0.04	378	700	0.11
8	300	305	0.06	400	960	0.09	380	1020	0.13	350	850	0.20	407	1100	0.06	433	1350	0.06	200	100	0.06	430	1280	0.14
9	285	365	0.04	400	980	0.07	455	1695	0.31	310	430	0.05	398	1150	0.03	363	875	0.10	189	100	0.05	470	1500	0.13
10	410	960	0.06	435	1375	0.18	370	890	0.04	330	620	0.12	404	1050	0.05	369	925	0.04	324	550	0.09	357	630	0.04
11	315	470	0.05	395	890	0.26	400	1090	0.14	320	575	0.06	446	1400	0.06	387	875	0.08	308	450	0.06	343	550	0.05
12	385	1010	0.06	375	690	0.10	315	485	0.04	360	840	0.06	414	1150	0.05	413	1200	0.07	369	750	0.11	440	1340	0.12
13	370	1000	0.03	400	840	0.08	410	1245	0.07	410	1300	0.06	386	900	0.06	439	1475	0.05	345	500	0.12	385	860	0.28
14	245	305	0.04	360	700	0.09	310	480	0.05	380	995	0.06	389	950	0.06	399	1000	0.21	399	1100	0.07	450	1485	0.07
15	180	160	0.04	400	1150	0.19	355	740	0.09	380	1295	0.18	360	700	0.08	408	1150	0.07	322	450	0.05	370	780	0.07
16	215	220	0.04	410	895	0.10	405	1165	0.07	370	930	0.11	364	700	0.06	433	1250	0.10	357	650	0.07	364	740	0.06
17	360	870	0.05	450	1445	0.09	330	515	0.06	340	790	0.04	395	1000	0.22	364	800	0.17	300	350	0.05	505	1870	0.14
18	400	1090	0.04	380	920	0.08	425	1385	0.07	360	975	0.35	429	1400	0.26	447	1600	0.06	311	400	0.07	332	500	0.04
19	480	2110	0.08	435	1280	0.24	330	655	0.15	380	1210	0.09	450	1700	0.07	390	1175	0.11	300	400	0.05	308	390	0.05
20	355	745	0.04	390	800	0.08	290	340	0.15	320	590	0.26	425	1100	0.13	406	1150	0.16	342	600	0.07	332	520	0.08
21	400	1100	0.04	450	1430	0.25	350	640	0.06	300	400	0.14	395	900	0.05	353	750	0.09	347	650	0.06	292	350	0.06
22	345	720	0.05	410	1050	0.10	350	605	0.10	350	865	0.12	387	850	0.04	376	900	0.03	350	650	0.25	338	510	0.11
23	310	540	0.04	380	800	0.12	350	600	0.10	310	620	0.05	388	950	0.07	327	550	0.06	320	550	0.06	318	380	0.14
24	360	855	0.04	410	1205	0.07	340	940	0.10	385	1075	0.07	390	850	0.23	348	625	0.03	333	500	0.07	304	410	0.10
25	345	715	0.04	375	680	0.06	410	980	0.12				417	1250	0.27	419	1120	0.15	264	250	0.10	313	370	0.06
26				380	975	0.09	405	915	0.09							332	540	0.04	238	160	0.39	296	320	0.06
27				420	1085	0.08	500	1005	0.50										253	210	0.07	385	825	0.08
28				350	645	0.08	475	860	0.59										166	50	0.02	414	1210	0.11
29				360	650	0.08													286	280	0.04	450	1330	0.12
30				350	540	0.11													318	410	0.10	419	1220	0.08
31				435	1330	0.23													279	310	0.08	420	1140	0.10
32				370	850	0.08													288	325	0.05	417	1115	0.08
33				360	765	0.17													330	500	0.18	494	1660	0.15
34				405	1010	0.26													365	750	0.08	453	1310	0.11
35				375	910	0.10													323	500	0.09	367	760	0.09
36				420	1315	0.15													350	600	0.07	352	520	0.06
37				380	895	0.10													305	350	0.05	397	915	0.06
38				390	880	0.09													350	650	0.08	477	1715	0.25
39				385	1070	0.07													349	500	0.10	375	745	0.07
40				450	1770	0.23													325	500	0.09			
41																			329	450	0.08			
42																			302	450	0.11			
43																			335	600	0.06			
44																			334	550	0.07			
45																			305	400	0.07			
46																			294	350	0.05			

Table 4. Mercury concentration of Area 4 whitefish, 1975, 1978-86.

Fish No	1975			1978			1979			1980			1981			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[3] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	180	150	0.06	355	625	0.38	425	1270	0.12	375	984	0.09	315	385	0.08	394	800	0.20	370	800	0.03	377	790	0.09	403	1000	0.10	362	573	0.09
2	185	170	0.03	370	705	0.22	364	615	0.09	375	1014	0.16	280	250	0.09	419	900	0.12	304	390	0.15	463	1650	0.08	416	1100	0.04	363	750	0.07
3	195	170	0.04	410	920	0.35	350	678	0.18	380	954	0.05	350	620	0.07	430	1125	0.13	287	410	0.04	410	1000	0.06	382	850	0.12	402	1150	0.15
4	270	345	0.05	390	930	0.35	345	555	0.06	350	720	0.11	380	745	0.07	384	750	0.09	413	1360	0.05	390	1000	0.08	390	900	0.16	435	1400	0.11
5	225	240	0.06	355	735	0.14	360	672	0.11	385	1158	0.14	310	460	0.05	387	775	0.10	416	1450	0.01	410	1050	0.09	331	550	0.10	402	1150	0.06
6	220	220	0.07	390	745	0.17	408	800	0.07	365	978	0.08	345	495	0.07	427	1100	0.21	382	1000	<0.01[2]	338	530	0.06	350	650	0.18	437	1425	0.07
7	280	355	0.05	225	95	0.16	435	1163	0.30	410	1254	0.10	335	465	0.09	440	1275	0.19	334	630	0.03	371	800	0.05	285	350	0.06	445	1425	0.12
8	260	320	0.05	250	180	0.21	356	720	0.10	380	888	0.15	310	380	0.06	454	1475	0.14	282	340	0.05	393	960	0.08	310	450	0.09	379	950	0.06
9	370	815	0.04	235	160	0.22	283	292	0.06	390	1242	0.18	285	300	0.08	377	700	0.12	300	400	0.06	333	540	0.01	310	450	0.13	438	1275	0.09
10	260	315	0.05	205	90	0.16	245	165	0.11	320	624	0.07	290	385	0.12	381	775	0.08	418	1290	0.06	420	1300	0.07	285	350	0.11	435	1350	0.08
11	380	870	0.09	420	1230	0.18	220	140	0.06	330	792	0.14	340	565	0.10	389	875	0.12	320	540	0.03	366	750	0.08	310	450	0.07	425	1350	0.07
12	370	815	0.05	400	940	0.12	236	151	0.07	420	1680	0.09	340	580	0.06	375	675	0.07	284	340	0.04	397	950	0.06	298	400	0.08	457	1625	0.08
13	360	795	0.05	405	900	0.33	370	700	0.11	395	1182	0.21	355	580	0.07	384	750	0.09	299	370	0.12	426	975	0.16	298	400	0.05	415	1275	0.09
14	340	685	0.05	320	690	0.09	400	890	0.11	340	786	0.10	305	390	0.06	398	1025	0.09	345	670	0.04	443	1270	0.09	416	1100	0.32	351	675	0.05
15	385	785	0.06	350	940	0.22	525	1970	0.09	410	1212	0.33	290	370	0.05	404	900	0.06	352	700	0.03	363	670	0.09	285	350	- [1]	408	1150	0.10
16	370	870	0.03	325	730	0.19	380	850	0.08	365	1224	0.07	360	625	0.04	347	1200	0.13	357	720	0.03	380	910	0.10	237	200	0.06	392	1025	0.07
17	260	325	0.02				395	1040	0.10	375	1014	0.08	375	710	0.07	420	1100	0.11	393	910	0.15	383	800	0.07	403	1000	0.08	458	1900	0.12
18	390	890	0.06				390	740	0.09	385	1050	0.10	300	400	0.09	364	700	0.07	390	960	0.05	404	920	0.08	367	750	0.08	413	1225	0.10
19	405	1030	0.04				310	370	0.07	410	1320	0.13	315	450	0.05	452	1350	0.16	389	930	0.04	353	740	0.07	298	400	0.11	442	1525	0.06
20	240	150	0.04				380	800	0.07	320	600	0.37	390	795	0.12	227	500	0.08	338	660	0.05	335	540	0.08	416	1100	0.14	367	850	0.08
21	425	1100	0.10				375	900	0.09	360	882	0.20	310	385	0.06	370	800	0.06	356	710	0.04	394	900	0.07	359	700	0.10	392	1100	0.08
22	330	550	0.03				365	870	0.07	410	1080	0.08	325	600	0.05	388	950	0.06	308	420	0.05	379	1000	0.04	390	900	0.15	374	825	0.10
23	425	1020	0.08				380	790	0.06	350	936	0.20	320	420	0.09	341	600	0.10	379	1110	0.06	450	1500	0.13	416	1100	0.07	424	1125	0.06
24	385	1040	0.05				265	195	0.09	360	1020	0.15	320	410	0.05	403	1075	0.06	350	790	0.03	333	460	0.09	403	1000	0.11	425	1175	0.08
25	390	830	0.07				300	325	0.06	360	816	0.07	300	360	0.07	393	1050	0.11				435	1290	0.16	416	1100	0.28	408	1125	0.07
26							280	245	0.08	380	1314	0.29	335	605	0.05							337	600	0.08				504	2400	0.09
27							270	265	0.12	300	492	0.17	350	580	0.15							443	1330	0.13				412	1375	0.07
28							310	335	0.10				390	920	0.08							379	750	0.09				363	775	0.05
29							280	250	0.13				370	785	0.08							417	1050	0.11				380	925	0.08
30							295	340	0.09				375	690	0.08							347	660	0.08				383	1000	0.06
31							270	220	0.11				360	750	0.11							334	610	0.08				435	1300	0.11
32							425	1210	0.26				385	870	0.06							382	825	0.07				371	925	0.06
33							380	820	0.09				395	740	0.07							380	900	0.07				458	1600	0.08
34							375	760	0.08				405	965	0.06							382	840	0.09				429	1350	0.14
35							405	900	0.09				370	650	0.07							430	1140	0.33				408	1250	0.08
36							420	980	0.11				330	500	0.05							334	510	0.08				395	1025	0.08
37							380	730	0.09				320	500	0.06							373	640	0.14				400	1150	0.09
38							360	640	0.08				370	800	0.07							418	1050	0.07				399	1100	0.07
39							425	1010	0.07				410	1030	0.06							368	925	0.08				375	925	0.06
40							405	960	0.09				360	650	0.08							465	1675	0.09				418	1725	0.08
41							400	940	0.06				340	560	0.08							495	1660	0.49				391	1125	0.07
42							380	700	0.10				365	670	0.05							283	290	0.06				478	1950	0.17
43							390	930	0.08				330	510	0.06							269	225	0.06				396	1125	0.11
44							430	1220	0.09				375	740	0.08							257	160	0.08				463	1650	0.07
45							420	1010	0.09				320	470	0.32							232	140	0.08				385	1000	0.06
46							410	875	0.09				350	650	0.08							444	1300	0.11				395	925	0.10
47							390	855	0.10				355	635	0.07							300	310	0.06				408	1700	0.10
48							410	1015	0.13				340	505	0.04													394	1150	0.09
49							370	600	0.08				370	690	0.09													413	1350	0.10
50							395	895	0.07				320	550	0.10													324	600	0.07
51							420	1005	0.09				365	680	0.08													434	1575	0.11
52							375	710	0.07				310	430	0.07															
53							410	945	0.12				380	810	0.10															
54							410	930	0.14				320	415	0.08															
55							410	920	0.10				290	350	0.04															
56							410	1000	0.08				435	1300	0.08															
57							410	985	0.08				455	1480	0.15															
58							420	1075	0.07				425	1510	0.06															
59							400	880	0.08				450	1390	0.09															
60							415	910	0.10				440	1475	0.08															
61													405	1130	0.11															
62													460	1970	0.11															
63													445	1445	0.11															
64													430	1310	0.03															
65													430	1350	0.05															
66													400	1090	0.10															
67													440	1320	0.08															

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

[2] Where [Hg] is shown as <0.01, 0.005 is used in calculation of means.

[3] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included Area 4 whitefish data from all previous years.

Table 5. Mercury concentration of Area 5 whitefish, 1975, 1981-82, 1984.

Fish No	1975			1981			1982			1984		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	425	1170	0.12	380	875	0.29	335	500	0.21	415	850	0.27
2	425	1180	0.08	385	910	0.20	355	625	0.09	332	850	0.12
3	305	510	0.04	350	665	0.28	328	450	0.18	413	800	0.15
4	370	770	0.07	365	755	0.15	318	450	0.18	396	800	0.21
5	410	1105	0.06	370	670	0.12	324	475	0.10	404	1000	0.18
6	400	970	0.05	375	865	0.20	422	1125	0.11	364	600	0.17
7	405	1060	0.09	405	1170	0.21	373	825	0.17	346	500	0.12
8	380	955	0.04	415	1105	0.36	408	1025	0.36	318	400	0.17
9	240	290	0.06	385	960	0.42	420	1075	0.29	326	350	0.16
10	220	230	0.04	410	1110	0.35	419	1050	0.33	430	1100	0.22
11	240	255	0.07	390	960	0.12	317	450	0.19	445	1100	0.42
12	360	830	0.05	405	1080	0.23	374	750	0.16	422	1200	0.12
13	300	530	0.05	380	965	0.30	361	700	0.21	399	750	0.15
14	350	810	0.06	350	715	0.27	485	1825	0.32	420	1100	0.22
15	440	1350	0.06	400	1050	0.27	364	650	0.12	434	1100	0.23
16	415	1200	0.09	480	1740	0.13	430	1200	0.24	376	800	0.17
17	370	920	0.07	390	920	0.17	382	875	0.17	420	1000	0.20
18	190	185	0.05	390	770	0.38	413	1000	0.30	444	1150	0.13
19	380	985	0.09	405	965	0.38	475	800	0.15	438	1200	0.30
20	425	1240	0.10	400	1035	0.34	426	1250	0.14	430	1150	0.12
21	240	260	0.06	390	1065	0.18	370	750	0.06	410	1100	0.19
22	380	880	0.08	430	1195	0.18	389	875	0.17	410	1000	0.29
23	355	780	0.05	445	1365	0.16	375	775	0.18	421	1150	0.16
24	300	440	0.08	410	1135	0.42	454	1225	0.10	414	1000	0.16
25	400	900	0.06	410	1310	0.37				447	1250	0.46
26										445	1250	0.13
27										421	1100	0.13
28										424	1000	0.11
29										415	1050	0.10
30										450	1500	0.23
31										371	700	0.12
32										444	1150	0.18
33										412	1000	0.28
34										437	1100	0.21
35										469	1600	0.15
36										430	1200	0.16
37										400	800	0.37
38										419	1000	0.21
39										376	700	0.15
40										410	800	0.40
41										370	700	0.16
42										416	900	0.29
43										405	950	0.13
44										400	800	0.24
45										414	1050	0.22
46										405	800	0.19
47										384	900	0.15
48										390	750	0.24
49										376	700	0.18
50										424	1300	0.18

Table 6. Mercury concentration of Issett Lake whitefish, 1975, 1978, 1982-86.

	1975			1978			1982			1983			1984			1985			1986		
Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	310	610	0.14	271	250	0.40	412	1175	0.24	410	1125	0.14	417	1150	0.34	428	1400	0.37	343	680	0.11
2	360	910	0.17	335	475	0.29	395	925	0.25	393	950	0.07	447	1400	0.24	358	775	0.18	315	460	0.04
3	380	960	0.14	307	400	0.36	406	1000	0.21	410	1275	0.17	428	1300	0.10	474	2000	0.31	360	670	0.03
4	300	585	0.17	320	500	0.17	410	1200	0.25	445	1600	0.24	365	750	0.09	412	1200	0.25	293	375	0.03
5	325	715	0.14	317	400	0.40	410	925	0.21	410	1150	0.12	395	950	0.32	436	1350	0.33	310	470	0.03
6	410	1465	0.14				400	950	0.28	380	1100	0.18	405	1100	0.23	390	1100	0.12	365	710	0.06
7	395	1280	0.16				361	725	0.19	408	1325	0.13	475	1850	0.23	430	1390	0.50	328	430	0.06
8	385	1200	0.14				409	1200	0.29	412	1200	0.23	375	850	0.12	430	1375	0.36	387	925	0.04
9	365	1050	0.16				409	1075	0.22	405	1100	0.19	482	1950	0.36	448	1550	0.27	378	840	0.05
10	310	640	0.14				385	900	0.13	415	1250	0.19	415	1100	0.14	412	1125	0.19	408	1120	0.10
11	330	760	0.13				370	725	0.25	405	1050	0.16	405	1050	0.23	396	1050	0.13	405	1090	0.30
12	390	1200	0.15				380	900	0.19	424	1200	0.16	475	1750	0.23	438	1250	0.32	367	800	0.04
13	405	1365	0.15				345	650	0.13	420	1200	0.20	355	700	0.25	468	2050	0.33	390	1110	0.11
14	340	930	0.14				361	375	0.14	380	900	0.21	331	550	0.26	428	1275	0.12	347	715	0.08
15	330	820	0.30				331	550	0.18	444	1500	0.19	439	1400	0.15	438	1450	0.25	353	700	0.12
16	370	1155	0.13				341	700	0.15	405	1100	0.13	426	1250	0.21	466	1750	0.33	345	660	0.04
17	435	1470	0.13				430	1375	0.24	415	1100	0.15	397	1100	0.13	392	1000	0.09	443	630	0.16
18	390	1460	0.12				353	625	0.12	385	1050	0.10	381	850	0.17	460	1750	0.18	403	950	0.07
19	310	550	0.15				401	1025	0.19	400	900	0.25	360	700	0.18	448	1450	0.08	350	660	0.02
20	390	1130	0.02				390	925	0.17	408	1250	0.20	393	900	0.21	484	1675	0.38	390	910	0.04
21	410	1235	0.14				351	625	0.36	370	975	0.18	330	500	0.21	418	1175	0.23	360	710	0.11
22	420	1440	0.18				335	550	0.27	390	1050	0.06	425	1250	0.22	472	1950	0.28	395	950	0.11
23	425	1430	0.14				375	800	0.17	420	1175	0.28	427	1300	0.24	430	1450	0.14	306	470	0.03
24	370	1090	0.12				441	1550	0.15	380	750	0.15	437	1400	0.23	468	1800	0.16	273	350	0.03
25							400	1050	0.21				425	1450	0.19	426	1250	0.25	298	410	0.04
26													440	1650	0.35	478	1950	0.11	436	1460	0.09
27													423	1250	0.22	396	1000	0.12	508	2410	0.38
28													318	450	0.07	434	1250	0.31	373	960	0.05
29													309	400	0.19	394	950	0.13	420	975	0.13
30													417	1300	0.38	462	1600	0.28	365	700	0.24
31													420	1100	0.40	350	680	0.07	370	850	0.06
32													424	1150	0.26	396	1075	0.14	397	960	0.09
33													535	2250	0.89	422	1300	0.33	354	670	0.12
34													375	800	0.20	450	1300	0.37	310	490	0.02
35													382	850	0.13	462	650	0.10	359	770	0.03
36													468	1650	0.29	326	650	0.05	333	590	0.07
37													395	900	0.27	460	1500	0.28	397	970	0.07
38													340	550	0.10	494	2100	0.24	408	1030	0.03
39													340	500	0.05	478	1900	0.32	304	420	0.06
40													440	1250	0.19	454	1600	0.53	305	410	0.07
41													388	900	0.09	460	1700	0.40	367	770	0.07
42													346	600	0.09	440	1400	0.21	320	500	0.04
43													422	1250	0.37	450	1400	0.29	408	1175	0.19
44													365	750	0.22	440	1600	0.28	312	460	0.08
45													458	1500	0.27	460	1600	0.28	354	700	0.20
46													393	1050	0.29	344	650	0.14	347	675	0.12
47													425	1200	0.19	454	1550	0.30	484	2150	0.41
48																478	1925	0.46	337	545	0.06
49																450	1700	0.33	315	400	0.04
50																472	1750	0.22	347	550	0.03
51																			372	750	0.07
52																			395	1150	0.07
53																			337	550	0.04
54																			380	840	0.04

Table 7. Mercury concentration of South Bay northern pike, 1978-86.

Fish No	1978			1979			1980			1981			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[1] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	700	2442	0.36	560	1240	1.05	680	2685	2.55	580	1730	0.72	638	1700	1.00	570	1275	1.59	625	1420	0.70	550	1175	0.97	583	1400	0.94
2	635	1698	0.64	530	1030	0.82	610	1680	0.48	540	1000	0.91	565	1300	0.96	555	1250	0.84	531	970	0.71	626	1750	1.11	496	690	0.72
3	660	1860	0.61	470	680	0.82	520	1115	0.84	510	895	0.90	467	650	0.60	539	1175	0.63	510	800	0.81	464	700	0.50	513	770	0.63
4	680	1920	0.43	500	990	0.50	590	1270	0.84	515	1010	0.80	483	675	0.82	709	2450	2.15	560	1150	1.54	441	600	1.08	543	1030	0.74
5	810	3654	0.46	520	1050	0.73	550	1900	0.53	665	2090	0.75	536	875	0.82	500	900	1.01	560	950	2.05	582	1400	0.91	527	900	0.48
6	641	1800	0.28	545	1250	1.02	510	1040	0.67	480	810	0.88	550	1025	0.93	570	1425	1.20	610	1450	1.61	441	600	0.28	564	1010	0.60
7	746	3050	0.85	440	700	0.70	510	1120	0.69	605	1800	0.84	528	975	1.02	565	1275	0.89	590	1340	1.40	530	1050	0.51	583	1210	0.87
8	894	5750	1.72	490	895	0.73	530	1120	0.71	535	1135	0.65	574	1225	0.38	540	950	0.68	580	1300	0.82	561	1250	0.65	518	930	0.56
9	555	1500	0.84	420	610	0.73	535	1180	0.61	545	1040	1.02	554	1225	0.59	675	2000	1.17	595	1350	1.65	464	700	0.40	519	840	0.95
10	845	4800	1.30	530	1280	0.70	540	1150	0.97	505	965	0.78	569	1325	0.93	570	1150	0.52	560	850	2.31	464	700	0.46	589	1475	1.10
11	588	1400	0.62	620	1965	0.57	450	670	0.71	620	1730	1.15	529	1075	0.81	560	1050	0.66	625	1450	1.98	629	1780	1.11	548	1000	0.85
12	545	1300	0.71	380	315	0.65	570	1330	0.80	580	1480	0.95	642	1875	1.54	550	1100	0.96	445	550	0.72	485	800	0.35	594	1130	0.82
13	580	1250	1.10	525	1010	0.80	500	800	1.06	535	1130	0.92	623	1400	0.80	690	2725	0.97	550	1000	0.80	481	780	0.68	516	930	0.34
14	550	1250	0.59	460	650	0.67	570	1165	0.43	535	1220	0.95	546	975	1.18	505	850	0.61	570	1100	1.48	464	700	0.74	568	1150	1.25
15	561	1200	1.00	385	370	0.69	550	1255	0.72	555	1730	0.74	528	1000	1.24	550	1100	0.25	545	1000	1.17	485	800	0.63	551	1130	0.64
16				635	1760	1.21	485	720	1.00	510	1050	1.03	544	975	0.96	480	875	0.15	640	1850	1.62	526	1025	0.48	560	1010	0.76
17				600	1810	1.04	570	1395	0.71	525	960	0.92	491	800	0.74	508	975	1.20	610	1400	2.53	435	575	0.52	538	890	1.16
18				530	1060	0.96	480	850	0.61	590	1570	1.00	551	1050	0.83	521	850	0.72	280	150	0.26	485	800	0.73	543	1080	0.75
19				520	950	0.55	605	1555	1.12	540	1160	0.96	684	2625	1.31	610	1450	0.62	495	850	1.13	595	1500	0.40	584	1040	1.74
20				425	540	0.46	550	1175	0.94	555	1360	0.77	598	1275	1.05	525	1050	0.52	505	600	1.10	632	1800	0.90	612	1200	1.63
21				580	1280	0.42	590	1750	0.59	550	1175	1.04	516	800	1.34	680	2200	0.64	490	750	1.15	568	1300	0.61	493	770	0.51
22				630	2055	0.63	560	1410	0.42	585	1510	0.89	564	1200	1.30	420	425	0.81	595	1400	1.37	632	1800	0.77	533	890	1.16
23				585	1270	0.52	500	1080	0.52	550	1290	0.90	596	1175	0.65	386	350	0.33	460	650	1.10	513	950	0.66	656	2080	1.29
24				420	450	0.71	505	1050	0.58	585	1690	0.93	465	675	0.82				570	1100	1.42	648	1950	0.66	552	950	0.53
25				475	850	0.88	480	845	0.80	560	1550	0.87	502	850	0.93				455	600	0.73	595	1500	0.97	682	2260	0.95
26				460	680	0.70	450	840	0.57				412	450	0.77				500	750	1.55	582	1400	0.82	631	1890	1.08
27				520	1210	0.65	525	855	0.68				551	1100	1.17				555	1010	2.02	521	1000	0.73	552	1000	0.81
28				560	1185	0.90	575	1440	0.72				656	2050	1.47				560	1050	0.77	538	1100	0.68	610	1270	0.43
29				565	1475	0.52	530	1120	0.92										586	1200	0.72	530	1050	0.38	538	1060	0.78
30				545	1535	0.98	600	1470	0.62										526	975	0.77	538	1100	0.64	564	1060	0.92
31				590	1705	0.72	510	910	0.91										522	910	0.87	561	1250	0.67	551	990	0.61
32				530	1230	0.68	495	1060	0.64										621	1650	0.95	504	900	0.66			
33				550	1160	0.94	500	1020	0.84										611	1555	0.82	546	1150	0.73			
34				480	830	0.58	530	1150	0.84										564	1020	0.72	561	1250	1.07			
35				590	1605	0.57													535	1030	0.71	568	1300	0.63			
36				525	1075	0.59													582	1150	0.57	546	1150	1.03			
37				515	1085	0.75																561	1250	0.55			
38				550	1320	0.50																708	2550	0.66			
39				615	2140	0.68																568	1300	0.33			
40				610	1660	0.64																674	2200	0.89			
41				575	1680	0.79																475	750	0.56			
42				635	2055	0.61																513	950	0.59			
43				640	2155	0.66																429	550	0.26			
44				570	1490	0.64																504	900	0.93			
45				630	2075	0.49																530	1050	0.40			
46				590	1795	1.02																538	1100	0.47			
47				505	900	0.54																568	1300	0.63			
48				530	1225	0.52																582	1400	0.84			
49				500	1010	0.54																561	1250	0.65			
50				580	1485	0.89																553	1200	0.52			
51				500	1125	0.45																					
52				525	1190	0.55																					
53				540	1110	0.61																					
54				500	1010	0.51																					
55				510	1050	0.50																					
56				530	1320	0.78																					
57				520	1300	0.52																					
58				510	875	0.55																					
59				440	640	0.62																					
60				500	1065	0.75																					

[1] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included South Bay northern pike data from all previous years.

Table 8. Mercury concentration of Channel northern pike, 1979-83, 1985-86.

	1979			1980			1981			1982			1983			1985			1986			1986 (cont'd)			
Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	490	660	0.81	565	1635	0.43	545	1110	0.72	556	850	0.82	545	1150	0.74	736	2650	1.27	456	690	0.63	52	532	1000	0.66
2	400	480	0.32	520	765	0.83	545	1050	0.66	503	725	0.63	525	900	0.51	582	1300	0.88	538	1125	0.44	53	632	1340	0.84
3	520	980	0.66	610	1570	0.67	605	1635	0.56	544	1025	1.01	635	1875	0.66	584	1200	0.63	560	1110	0.77	54	482	610	0.26
4	350	310	0.35	515	970	0.45	500	950	0.64	467	625	0.91	530	1150	0.45	612	1550	0.78	487	700	0.47	55	468	525	0.73
5	610	1575	0.43	575	1310	0.91	610	1570	0.65	446	625	0.48	509	1025	0.57	634	1800	0.93	491	810	0.42	56	596	1250	0.73
6	400	410	0.38	580	1420	0.57	540	1260	0.67	526	975	0.63	595	1300	0.54	486	800	0.37	523	850	0.79	57	515	850	0.66
7	450	610	0.35	520	965	0.53	475	890	0.58	554	1050	1.09	650	1475	1.35	502	850	0.57	554	1040	0.72	58	720	2225	1.09
8	590	1425	0.52	580	1390	0.49	500	880	0.70	547	950	0.81	513	975	0.47	480	750	0.66	463	700	0.50	59	605	1350	0.74
9	385	365	0.38	515	990	0.52	505	710	1.00	596	1450	0.67	520	1125	0.46	552	1050	0.33	455	560	0.61	60	525	810	0.54
10	360	310	0.29	570	1190	0.70	510	920	0.48	536	525	0.80	505	900	0.86	494	750	0.80	505	950	0.38	61	520	850	0.84
11	410	420	0.35	645	1890	0.63	550	1390	0.42	547	1025	0.66	490	850	0.38	612	1650	0.94	515	970	0.65	62	560	1050	0.55
12	620	1900	0.77	520	1040	0.63	555	1195	0.81	499	925	1.03	523	1000	0.38	526	950	0.52	485	810	0.42	63	470	600	0.44
13	640	1760	0.70	375	840	0.13	455	740	0.53	508	750	0.69	537	1050	0.61	537	1050	0.55	582	1440	0.58	64	545	870	0.87
14	610	1540	0.89	390	1345	0.30	450	680	0.74	554	1050	0.67	570	1350	0.58	606	1850	0.89	549	950	0.83	65	560	1090	0.67
15	620	1705	0.61	310	500	0.05	480	720	0.69	559	975	0.84	427	650	0.48	538	950	0.89	490	860	0.56	66	540	890	0.57
16	550	1180	0.68	365	1020	0.13	580	1435	0.57	633	1950	0.80	527	1075	0.50	516	1000	0.65	555	1260	0.52	67	462	450	0.61
17	425	570	0.46	370	950	0.05	590	1350	0.64	550	1125	0.82	515	1025	0.50	516	850	0.85	526	1030	0.41	68	502	825	0.50
18	435	555	0.70	570	1480	0.52	510	1240	0.48	513	750	0.94	617	1450	0.82	520	1000	0.53	512	830	0.77	69	530	990	0.32
19	495	895	0.35	655	1725	1.00	470	840	0.78	563	1200	0.79	555	825	0.98	540	950	0.83	510	930	0.69	70	487	580	0.82
20	460	620	0.76	645	2090	0.75	495	795	0.72	584	1200	0.83	580	1550	0.68	544	950	0.92	494	840	0.59	71	433	530	0.47
21	450	715	0.45	550	1065	0.80	490	800	0.63	500	850	0.59	525	1175	0.34	604	1650	1.65	577	1300	0.38	72	409	500	0.41
22	485	660	0.74	565	1390	0.71	550	1315	0.65	464	600	0.62	485	875	0.05	622	1750	0.93	535	960	0.66	73	513	685	0.75
23	520	945	0.57	520	1030	0.68	485	780	0.67	580	1200	0.83	657	1850	1.15	558	1350	0.71	423	510	0.51	74	488	840	0.52
24	470	825	0.49	550	1070	0.53	510	1105	0.46	587	1250	0.63	560	1250	0.52	486	750	0.68	622	1525	1.01	75	558	1240	0.60
25	500	935	0.46	490	705	0.76	495	995	0.48	651	1950	0.73	685	2075	0.76	524	1000	0.52	558	1240	0.85	76	420	415	0.49
26	480	775	0.69	500	860	0.45							525	1050	0.66	574	1150	0.55	457	630	0.24	77	543	1185	0.35
27	515	910	0.76	620	1360	0.79							570	1275	0.62	450	600	0.20	511	825	0.65	78	492	670	0.62
28	450	600	0.50	555	1005	0.80							590	1250	0.61	642	700	0.94	542	1130	0.45	79	533	980	0.83
29	565	1300	0.54	540	1020	0.47							560	950	1.20	540	1000	0.51	514	1010	0.56	80	625	1525	0.97
30	580	1340	0.69	515	1060	0.59							530	950	0.67	480	700	0.35	518	700	0.99	81	545	1070	0.71
31	550	1180	0.57	635	1865	0.48							490	850	0.50	530	950	0.77	584	1270	0.50	82	558	800	1.07
32	510	950	0.89	520	1020	0.53							460	650	0.48	508	1000	0.36	530	800	0.72	83	527	945	0.74
33	495	795	0.61	530	1005	0.67							510	850	0.64	566	1200	0.80	493	625	0.66	84	480	690	0.18
34	515	1020	0.65	550	1120	0.51							585	1050	1.02	480	800	0.73	510	975	0.48	85	561	1155	0.42
35	485	890	0.75	510	920	0.35							525	925	0.63	540	1100	0.63	523	910	0.73	86	484	555	0.99
36				510	930	0.53							540	1050	0.85	650	1400	1.59	522	860	0.52	87	508	820	0.81
37				510	1150	1.11										556	800	1.32	515	740	0.58	88	528	660	0.72
38				655	2130	0.75										440	500	0.52	522	1000	0.47	89	561	1260	0.59
39																308	450	0.30	520	750	0.80	90	539	1020	0.58
40																620	1500	0.89	525	925	0.30	91	490	650	0.73
41																540	1050	0.93	525	880	0.82	92	470	600	0.67
42																520	1000	0.85	540	945	0.61	93	519	810	0.87
43																560	1250	0.34	555	975	0.75	94	551	930	0.75
44																600	1200	0.96	492	750	0.49	95	560	1090	0.73
45																			473	710	0.44	96	552	1050	0.82
46																			532	810	0.51	97	500	810	0.45
47																			529	740	0.74	98	465	580	0.46
48																			583	1060	0.53	99	549	1040	0.60
49																			533	810	0.65	100	553	915	0.88
50																			483	675	0.60	101	473	480	0.66
51																			559	1000	0.71				

Table 9. Mercury concentration of Camp 9 northern pike, 1979-84, 1986.

Fish No	1979			1980			1981			1982			1983			1984			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	680	2670	0.71	660	1995	0.68	550	1215	0.45	555	1050	0.62	580	1275	0.85	554	950	0.84	654	1960	0.89
2	495	815	0.55	625	1715	0.60	450	625	0.76	558	1050	0.78	550	975	0.66	499	700	0.56	633	1880	0.72
3	485	860	0.60	605	1500	0.46	510	960	0.57	606	1450	0.65	645	1950	0.76	448	600	0.68	620	1670	0.60
4	480	760	0.53	610	1525	0.41	525	945	0.64	556	1100	0.66	615	1400	0.75	446	550	0.43	475	700	0.86
5	685	2365	0.56	530	1020	0.76	555	1060	0.43	545	1100	0.49	645	1750	1.07	436	500	0.59	513	750	0.75
6	490	940	0.55	495	885	0.42	545	1140	0.83	525	1100	0.49	565	1150	0.65	410	450	0.31	530	1020	0.51
7	440	620	0.62	570	1070	0.64	575	1035	0.89	537	950	0.62	585	1450	0.61	329	250	0.18	565	1065	0.67
8	485	930	0.54	555	1175	0.54	555	1230	0.96	607	1450	0.83	655	1800	0.73	538	880	0.84	537	850	0.75
9	535	1105	0.48	520	1130	0.51	570	1210	0.66	738	2900	0.43	570	1200	0.69	538	780	0.98	583	1340	0.60
10	660	2130	0.46	570	1300	0.71	520	980	0.57	595	1500	0.51	545	1000	0.69	565	1100	0.57	572	1210	0.88
11	470	810	0.64	570	1125	0.91	505	900	0.45	564	1200	0.76	595	1500	0.65	684	2420	1.36	555	1140	0.86
12	520	1150	0.51	550	1020	1.01	590	1500	0.67	586	1350	0.69	570	1250	0.78	412	460	0.32	626	1280	0.90
13	510	1030	0.46	570	1340	0.46	535	925	0.71	582	1150	0.78	560	1200	0.58	440	500	0.60	491	690	0.87
14	700	2465	0.82	510	960	0.60	455	715	0.61	653	1650	0.96	605	1350	0.74	528	940	0.65	587	1360	0.84
15	550	1190	0.51	695	2250	0.44	480	820	0.55	679	2000	0.87	580	1250	0.60	508	850	0.71	820	3940	1.06
16	500	860	0.52	585	1385	0.51	570	1310	0.49	619	1675	0.69	565	1050	0.84	410	510	0.26	700	2310	0.97
17	530	1060	0.71	610	1465	0.73	585	1400	0.73	584	1550	0.60	600	1550	0.76	498	795	0.57	627	1500	0.69
18	580	1515	0.56	585	1260	0.57	560	1180	0.57	610	1475	0.85	515	1000	0.53	452	550	0.54	535	960	0.65
19	530	1130	0.38	570	1240	0.68	610	1450	0.87	610	1500	0.54	530	1000	0.49	395	410	0.35	573	1150	0.65
20	480	725	0.48	510	950	0.62	460	680	0.65	560	1200	0.83	595	1250	0.58	405	455	0.42	590	1065	0.92
21	580	1290	0.54	645	1890	0.59	705	2550	0.71	623	1425	0.71	671	2010	0.65	372	355	0.24	535	850	0.79
22	515	885	0.77	625	1520	0.51	485	845	0.61	745	3450	0.61	763	3230	0.42	373	320	0.49	665	1755	0.99
23	510	955	0.68	590	1230	0.78	650	2110	0.84	732	2800	0.71	786	3720	0.87	617	1650	0.71	523	875	0.72
24	470	850	0.43	780	3730	0.68	500	950	0.59	544	1000	0.56	547	1050	0.55	807	3950	1.08	705	2075	1.05
25	475	835	0.44	540	1285	0.66							566	1375	0.59	494	740	0.74			
26	510	935	0.44	430	680	0.64										380	360	0.35			
27	515	960	0.64	575	1450	0.57										330	245	0.16			
28	485	730	0.58	430	660	0.56										408	445	0.35			
29	520	1090	0.36	460	710	0.65										575	1340	0.66			
30	660	1490	1.10	460	690	0.53										447	630	0.39			
31	590	1580	0.40	525	960	0.59										597	1340	0.65			
32	635	1740	0.58													446	560	0.58			
33	610	1825	0.45													580	1440	0.63			
34	810	5000	1.00													545	1140	0.91			
35	715	2730	0.86													353	360	0.17			
36																440	570	0.49			
37																573	1125	0.98			
38																483	745	0.37			
39																522	975	0.63			
40																522	1095	0.92			
41																563	1040	0.57			
42																335	235	0.34			
43																455	650	0.64			
44																525	890	0.59			
45																675	700	0.61			
46																372	350	0.32			

Table 10. Mercury concentration of Area 4 northern pike, 1979-82, 1984-86.

	1979			1980			1981			1982			1984			1985			1986		
Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[1] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	510	859	0.40	490	885	0.70	490	960	0.67	680	2375	0.52	683	2300	0.80	560	1250	0.71	580	1210	0.91
2	490	700	0.75	575	1520	0.71	545	1240	0.89	664	2000	0.59	520	950	0.63	553	1200	0.72	653	1660	0.93
3	500	870	0.61	575	1305	0.65	930	7300	1.05	654	1525	0.74	527	900	0.79	553	1200	0.40	600	1450	0.78
4	500	890	0.48	420	605	0.59	580	1180	0.80	429	500	0.35	610	1360	0.68	546	1150	0.53	561	1075	0.55
5	490	780	0.44	490	840	0.66	555	1370	0.64	511	1125	0.74	545	940	0.63	522	1000	1.03	567	1200	0.67
6	440	550	0.40	535	1250	0.67	530	1120	0.73	533	1225	0.43	442	550	0.63	538	1100	0.37	689	2075	0.85
7	540	990	0.46	570	1470	0.45	600	1580	0.62	594	1250	0.65	502	800	0.87	505	900	0.27	532	925	0.62
8	480	610	0.58	465	805	0.54	615	1750	0.77	570	1275	0.67	467	540	0.64	522	1000	0.57	673	2275	0.67
9	610	1440	0.62	565	1555	0.57	465	725	0.19	621	1525	0.77	400	400	0.41	617	1700	0.82	512	875	0.41
10	540	1020	0.45	540	1245	0.46	480	860	0.65	604	1400	0.64	635	1675	0.69	522	1000	0.90	585	1075	0.81
11	510	950	0.47	665	2425	0.45	500	825	0.58	594	1425	0.59	604	1675	0.76	633	1850	0.86	562	1250	0.59
12	490	860	0.48	495	920	0.74	520	1135	0.58	552	950	0.66	578	1430	0.74	553	1200	0.54	704	2275	1.40
13	530	1120	0.44	670	2780	0.82	590	1475	1.03	557	1150	0.76	630	1650	0.83	611	1650	0.85	650	1825	0.84
14	520	920	0.41	520	1265	0.64	630	1760	0.65	570	1050	0.76	530	940	0.66	654	2050	1.20	454	650	0.52
15	520	1080	0.36	560	1470	0.52	540	1100	0.71	528	1025	0.82	493	660	0.98	546	1150	1.32	552	1075	0.59
16	510	790	0.55	515	910	0.65	520	1110	0.77	560	1150	0.67	466	500	0.86	617	1700	0.91	538	975	0.77
17	480	950	0.33	585	1450	0.77	525	920	0.58	550	1025	0.71	544	1125	0.71	546	1150	0.75	535	925	0.55
18	410	550	0.34	610	2190	0.55	540	980	1.13	556	1300	0.48	462	640	0.42	560	1250	0.52	484	650	0.58
19	320	280	0.30	505	930	0.69	570	1330	0.71	630	1800	0.71	462	620	0.61	553	1200	1.00	574	1275	0.57
20	510	920	0.59	450	720	0.54	515	955	0.50	625	1650	0.65	425	490	0.55	580	1400	0.78	512	825	0.67
21	445	865	0.43	530	1310	0.72	540	1030	0.72	583	1475	0.62	420	390	0.58	611	1650	0.92	791	3225	0.71
22	420	575	0.45	485	960	0.56	480	930	0.60	535	1000	0.61	387	340	0.27	599	1550	1.01	480	675	0.37
23	460	810	0.31	540	1220	0.54	525	890	0.82	548	1000	0.58	386	375	0.21	669	2200	1.02	685	1725	0.68
24	490	640	0.48	460	810	0.71	520	860	0.74	708	2600	0.45	389	350	0.36	505	900	0.93	604	1400	0.75
25	465	725	0.35	520	1075	0.86	490	680	0.96				387	340	0.50	605	1600	0.62	660	2125	0.72
26	455	685	0.47	510	980	0.62										649	2000	1.06	731	3225	0.49
27	505	910	0.39	805	4450	0.91										522	1000	1.09	575	1250	0.67
28	610	1710	0.42	430	600	0.49										553	1200	0.84	674	2000	0.74
29	530	960	0.56													593	1500	0.69	612	1525	0.68
30	455	670	0.46													487	800	0.57	650	1725	0.75
31	570	1175	0.35													522	1000	0.43	570	1275	0.68
32	535	985	0.54													574	1350	0.83	589	1175	0.88
33	515	910	0.44													593	1500	0.42	470	750	0.29
34	470	710	0.41													496	850	1.02	552	1025	0.64
35	375	370	0.34													530	1050	0.64	611	1725	0.50
36	525	870	0.51													593	1500	0.58	547	925	0.57
37	610	1600	0.49													487	800	0.40			
38	540	1170	0.38													574	1350	0.81			
39	530	1080	0.34													567	1300	0.77			
40	440	665	0.37													522	1000	0.43			
41	570	1190	0.56													560	1250	0.70			
42	530	1090	0.42													496	850	0.67			
43	485	665	0.44													530	1050	0.85			
44	385	380	0.34													553	1200	0.45			
45	345	295	0.36													514	950	0.59			
46	610	1530	0.94													538	1100	0.50			
47	720	2780	0.89																		
48	585	1585	0.43																		
49	740	3260	0.74																		
50	620	1815	0.63																		
51	620	1700	0.49																		
52	1030	11465	0.49																		
53	610	1610	0.63																		
54	790	4340	1.20																		

[1] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included Area 4 northern pike data from all previous years.

Table 11. Mercury concentration of Area 5 northern pike, 1979, 1981-82, 1984-85.

	1979			1981			1982			1984			1985		
Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	455	540	0.60	585	1410	0.82	505	875	0.81	645	1400	0.91	609	1500	0.42
2	535	960	0.63	460	820	0.52	564	1275	0.52	547	1100	0.38	499	850	0.35
3	440	660	0.60	650	2045	0.94	592	1350	0.88	549	900	0.85	519	950	0.29
4	420	520	0.43	530	995	0.82	690	2000	0.91	439	550	0.32			
5	510	935	0.44	625	1760	0.64	565	1175	1.13	500	800	0.38			
6	540	1090	0.69	510	980	0.65	452	600	0.71	420	450	0.50			
7	475	785	0.56	440	665	0.53	544	1025	0.70	311	200	0.20			
8	425	510	0.63	575	1330	1.01	568	1100	0.92	554	1100	0.95			
9	485	830	0.56	470	890	0.61	637	1525	0.81	589	1400	0.45			
10	510	890	0.86	580	1610	0.69	545	1125	0.81	624	1600	1.05			
11	470	730	0.48	545	1180	0.50	510	925	0.65	436	500	0.42			
12	515	900	0.54	560	1200	0.79	567	1275	0.83	476	600	0.62			
13	480	625	0.50	440	720	0.40	540	975	0.39	532	1050	0.64			
14	465	670	0.57	545	1060	0.62	568	1375	1.15	526	1000	0.63			
15	350	270	0.47	540	1105	0.68	605	1575	0.66	480	800	0.21			
16	560	1180	0.58	575	1415	0.79	548	1150	0.52	453	600	0.29			
17	640	1800	0.50	440	680	0.49	645	1500	0.61	412	400	0.21			
18	510	950	0.64	470	740	0.47	611	1300	1.23	529	1000	0.62			
19	520	1000	0.57	600	1955	0.55	545	1025	0.73	420	450	0.42			
20	415	485	0.41	580	1350	0.73	542	1050	0.57	416	400	0.23			
21	520	950	0.54	510	910	0.89	570	1125	0.93	390	350	0.38			
22	380	450	0.50	530	1130	0.67	541	1100	0.98	290	125	0.19			
23	375	350	0.46	525	1120	0.64	610	1300	0.84	315	150	0.24			
24	415	435	0.70	570	1080	0.92	640	1725	0.68	296	125	0.20			
25	410	470	0.34	560	1230	0.64				324	200	0.23			
26	655	1970	0.57							495	800	0.71			
27	600	1415	0.77							533	1100	0.67			
28	590	1370	0.65							453	600	0.56			
29	460	775	0.69							530	950	0.38			
30	480	730	0.65							520	1050	0.73			
31	615	1480	0.82							617	1550	0.79			
32	665	1955	0.91												
33	675	1970	1.02												
34	650	1440	1.13												
35	402	795	0.62												
36	386	638	0.59												
37	330	390	0.43												
38	380	582	0.53												
39	380	570	0.77												
40	261	185	0.67												

Table 12. Mercury concentration of Issett Lake northern pike, 1978, 1982-86.

Fish No	1978			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	608	1750	0.57	757	3550	1.75	545	1150	0.87	819	4600	1.31	826	5175	1.51	520	825	0.83
2	587	1525	0.71	629	1925	0.73	675	3100	1.11	642	1860	1.37	624	1775	1.36	538	1150	0.20
3	599	1350	0.74	608	1475	1.04	525	1050	0.75	745	3200	1.04	820	4325	1.45	770	3810	1.17
4	594	1400	0.65	656	2025	0.70	645	2100	0.88	600	1160	1.55	540	1175	0.86	573	1000	1.14
5	476	725	0.37	496	850	0.77	610	1850	0.93	705	2740	1.59	510	900	0.51	673	2220	1.32
6				583	1275	0.66	500	900	0.75	678	2310	1.17	734	3000	0.85	665	1860	1.63
7				420	425	1.15	548	1100	0.84	780	3250	2.88	832	4250	1.40	500	890	0.51
8				410	425	0.47	665	1950	0.71	585	1410	1.00	868	5150	1.80	400	450	0.53
9				707	2950	1.00	633	1700	0.79	670	2160	1.06	894	6800	1.37	955	6940	1.25
10				785	3750	1.60	570	1150	1.05	555	1260	0.78	868	5725	0.86	455	700	0.40
11				604	1550	0.92	590	1450	1.35	684	2500	0.84	850	4900	1.45	445	640	0.54
12				509	825	0.63	720	3200	1.15	531	1000	0.62	580	1275	1.03	505	920	0.62
13				649	700	0.66	603	1900	0.80	700	2700	2.32	680	2200	1.10	557	970	1.24
14				495	825	0.51	650	1950	0.97	522	1050	0.95	592	1500	0.59	547	940	0.36
15				439	600	0.47	760	3975	1.09	553	1050	0.89	562	1275	0.86	610	1550	1.26
16				459	625	0.79	495	850	0.50	503	900	0.40	850	5225	2.01	640	1370	0.87
17				414	475	0.52	585	1425	1.06	590	1350	1.18	798	3300	1.13	652	1960	1.47
18				426	500	0.42	750	2850	1.44	563	1260	0.68	782	3700	0.91	632	2060	1.09
19				501	750	0.94	515	1000	0.62	480	690	0.72	700	2700	1.14	560	1280	0.75
20				482	800	0.36	710	3075	0.99	448	640	0.77	572	1250	0.62	354	690	0.25
21				830	5000	1.18	610	1950	1.04	950	7650	1.31	600	1350	1.12	722	2800	1.06
22				760	3600	1.26	753	3075	1.08	333	250	0.25	604	1500	0.93	535	1030	0.62
23				725	3650	0.98	610	2100	1.02	762	3400	1.21	754	3225	1.17	663	2250	0.98
24				675	2400	1.63	625	1825	1.65	578	1300	0.85	572	1325	0.62	455	760	0.53
25				754	3100	1.29	820	4925	1.05	510	950	0.65	552	1200	1.00	575	1250	0.85
26				765	3050	0.98	875	5775	1.16	502	700	0.87	914	6200	1.05	593	1600	0.53
27							645	2275	0.90	457	550	1.08	820	3450	1.42	515	1150	0.55
28							835	5225	1.00				660	1700	1.35	620	1520	0.84
29							825	5400	1.06				668	2125	1.48	860	4825	1.20
30							735	3750	1.38				662	1850	1.12	847	5010	0.95
31							715	2425	2.28				870	4700	1.34	705	2680	1.47
32							745	3005	1.04				612	1525	0.62	915	7260	1.65
33							625	2010	0.87				606	1750	0.45			
34							645	2075	0.92				566	1225	0.52			
35							660	2225	1.20				568	1275	0.91			
36													876	6000	1.34			
37													870	5550	1.49			
38													854	5300	1.03			
39													800	4350	1.44			
40													826	4125	2.00			
41													730	2600	1.42			
42													712	2850	1.11			
43													624	1550	0.96			
44													790	3700	1.17			
45													820	5050	1.42			
46													512	950	0.53			
47													825	4450	1.05			
48													684	2250	1.30			
49													878	4550	1.42			
50													620	1700	0.65			

Table 13. Mercury concentration of South Bay walleye, 1978-86.

Fish No	1978			1979			1980			1981			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[1] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	445	840	0.71	460	1770	0.52	350	605	0.53	390	710	0.32	371	660	0.89	420	925	0.41	380	700	0.90	410	800	0.57	400	690	0.43
2	472	917	0.75	325	490	0.13	405	755	0.67	340	500	0.46	315	300	1.52	385	600	0.39	360	625	0.48	392	700	0.33	394	720	0.50
3	459	980	1.00	300	425	0.06	335	475	0.61	425	1060	1.94	299	275	1.12	375	550	0.51	350	550	1.24	435	950	0.43	405	710	0.61
4	439	644	0.71	270	320	0.14	410	830	0.86	395	760	0.52	299	275	0.37	420	750	0.87	380	550	0.79	435	950	0.43	373	570	0.46
5	459	952	0.76	280	345	0.31	390	655	0.69	345	475	0.58	311	275	1.00	390	650	0.52	390	600	0.50	392	700	0.40			
6	493	1029	0.46	300	420	0.06	370	610	0.47	390	820	0.37	305	250	1.00	410	800	0.60	405	750	0.51	503	1450	0.34			
7	450	1100	0.92	280	310	0.06	350	540	0.70	375	730	0.85	324	300	1.61	430	950	0.47	360	450	0.48	323	400	0.19			
8	430	1050	0.58	255	220	0.12	340	425	0.54	350	555	0.43	250	150	1.32	405	700	0.70	403	700	0.59	309	350	0.20			
9	444	1400	1.20	370	825	0.13	450	920	0.63	385	670	0.68	365	350	1.66	410	750	0.85	417	750	0.49	397	725	0.51			
10	555	1500	1.12	210	135	0.21	355	475	0.62	380	595	0.79	337	325	1.20	380	600	0.36	435	840	0.69	457	1100	0.47			
11	406	800	0.72	220	175	0.26	400	780	0.66	410	680	0.60	345	450	0.64	390	650	0.48	426	910	0.50	255	200	0.65			
12	362	600	0.78	365	580	0.50	355	720	0.48	400	675	0.56	375	575	0.38	405	775	0.46	409	680	0.68	349	500	1.64			
13	366	600	0.73	385	655	0.58	380	600	0.33	425	840	0.75	398	700	0.58	405	700	0.35	408	780	0.56	255	200	0.68			
14	342	500	0.62	360	565	0.59	340	490	0.53	375	595	0.52	319	400	0.31	383	575	0.42	420	790	0.72	337	450	1.13			
15	407	900	0.99	390	600	0.52	415	820	0.70	350	480	0.48	388	650	0.52	410	700	0.32	316	310	0.38	410	800	0.45			
16				350	570	0.30	460	1170	1.03	385	650	0.73	388	650	0.52	408	725	0.64	370	540	0.41	293	300	1.06			
17				395	800	0.54	360	545	0.37	395	805	0.68	378	600	0.38	397	675	0.74	435	950	0.60	293	300	0.72			
18				335	480	0.59	380	635	0.82	375	610	0.64	343	425	0.43	425	950	0.42	346	450	0.40	330	425	0.98			
19				360	560	0.63	370	560	0.69	410	855	0.88	304	300	0.44	375	600	0.35	494	1500	1.49	427	900	0.37			
20				350	515	0.48	390	650	0.49	370	630	0.57	409	725	0.61	349	475	0.39	431	800	0.50	464	1150	1.66			
21				340	440	0.34	375	600	0.55	355	580	0.58	393	675	0.36	420	800	0.82	350	450	0.38	323	400	0.25			
22				360	550	0.48	425	855	0.85	420	865	0.70	397	625	0.54	380	600	0.33	375	600	0.85	397	725	0.91			
23				345	450	0.40	350	530	0.48	375	560	0.53	412	750	0.78	440	950	0.91	304	300	0.64	372	600	0.64			
24				360	550	0.36	350	530	0.63	370	585	0.68	438	950	0.88	376	625	0.47	327	400	0.63	382	650	0.53			
25				350	525	0.36	340	495	0.37	380	585	0.47	404	725	0.38	352	525	1.38	346	450	0.80	371	595	0.32			
26				350	510	0.51	340	460	0.44	365	545	0.42				390	600	0.53				349	500	0.48			
27				350	490	0.46	340	420	0.34							430	800	0.68				323	400	1.27			
28				390	1075	0.33	390	630	0.47							398	725	0.72				410	800	0.64			
29				445	1905	0.38										418	825	0.66				330	425	1.11			
30				390	975	0.07										390	650	0.42				401	750	0.38			
31				370	840	0.08										361	575	0.38				323	400	0.71			
32				450	1660	0.45										404	675	0.58				316	375	0.83			
33				380	750	0.08										430	825	0.82				394	710	0.42			
34				410	865	0.77										400	600	0.48				481	1275	1.63			
35				410	930	0.90										247	125	0.67				349	500	0.97			
36				365	675	0.51										227	100	0.18				323	400	0.79			
37				435	990	0.86																478	1250	1.58			
38				425	1080	0.56																309	350	0.94			
39				405	895	0.85																323	400	0.75			
40				420	1005	0.84																293	300	0.54			
41				360	680	0.55																361	550	0.33			
42				390	795	0.44																402	752	0.45			
43				360	595	0.42																285	275	0.91			
44				385	730	0.55																397	725	0.24			
45				420	1080	1.11																382	650	0.86			
46				410	885	1.09																419	850	0.54			
47				440	1220	0.47																372	600	0.27			
48				380	735	1.14																410	800	0.45			
49				430	910	0.54																349	500	0.72			
50				350	540	0.52																355	525	0.62			
51				390	775	0.67																					

[1] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included South Bay walleye data from all previous years.

Table 14. Mercury concentration of Channel walleye, 1979-83, 1985.

Fish No	1979			1980			1981			1982			1983			1985		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	320	410	0.26	415	970	0.48	365	565	0.54	414	575	0.55	423	1000	0.37	428	900	0.60
2	465	1270	0.35	375	620	0.51	360	540	0.45	419	850	0.51	457	925	0.45	366	600	0.27
3	405	795	0.35	410	950	0.44	420	845	0.55	393	650	0.37	415	750	0.44	362	700	0.45
4	330	430	0.30	450	870	0.67	405	845	0.43	401	775	1.41	350	525	0.61	430	900	0.59
5	320	370	0.33	410	890	0.40	410	795	0.47	432	875	0.81	297	325	0.25	422	900	0.55
6	390	750	0.41	455	1050	0.70	420	910	1.19	353	525	0.40	275	250	0.29	436	1000	0.31
7	305	320	0.30	410	865	0.43	345	500	0.51	354	500	0.42	310	300	0.28	410	800	0.26
8	350	595	0.34	410	795	0.79	370	630	0.37	394	700	0.38	415	800	0.43	376	650	0.33
9	285	245	0.35	420	800	0.49	415	880	0.44	390	700	0.37	465	1300	0.40	432	900	0.40
10	430	970	0.98	365	585	0.33	335	430	0.36	401	750	0.37	405	750	0.47	420	900	0.41
11	430	985	2.19	330	440	0.29	350	530	0.39	453	1100	0.36	405	750	0.44	362	550	0.31
12	350	535	0.52	360	600	2.04	415	865	0.63	420	850	0.28	340	500	1.76	354	550	0.28
13	380	705	0.37	375	690	0.61	395	810	0.56	368	500	0.46	415	750	0.61	340	550	0.29
14	390	740	0.35	365	570	0.56	400	820	0.43	316	300	0.41	400	700	0.40	390	750	0.50
15	180	50	0.31	385	700	0.42	345	350	1.22	327	350	0.43	400	650	0.36	402	800	0.29
16	385	680	0.42	400	655	0.80	360	560	0.42	390	650	0.30	370	700	0.38	440	1100	0.66
17	310	330	0.36	395	710	0.46	430	960	0.93	397	675	0.32	400	750	0.40	416	900	0.44
18	320	340	0.34	410	795	0.71	410	825	0.45	256	550	0.29	305	300	- [1]	410	900	0.37
19	325	395	0.74	340	455	0.32	420	890	0.41	424	875	0.36	405	700	0.25	380	700	0.39
20	285	240	0.33	355	505	0.43	425	800	0.57	364	550	0.51	385	700	0.48	450	1151	1.46
21	305	330	0.52	375	665	0.41	400	855	0.76	362	525	0.45	410	850	0.31	350	550	1.41
22	280	230	0.49	445	1095	0.72	415	960	0.69	340	500	0.30	405	750	0.94	352	600	0.34
23	295	295	0.44	335	480	0.36	375	665	0.65	456	1050	0.43	430	750	0.51	358	500	0.44
24	300	305	0.37	440	1180	0.47	385	670	0.34	389	675	0.23	420	850	0.39	358	500	0.27
25	300	330	0.53	430	925	0.54	325	390	0.38				395	675	0.66	432	900	0.41
26	300	295	0.51	405	870	0.44	370	585	0.32							390	650	0.34
27	330	410	0.31	380	640	0.43	375	640	0.35							348	500	0.29
28	290	260	0.32	400	890	0.52	415	950	0.70							394	900	0.44
29	315	330	0.46	380	700	0.49	350	505	0.46							438	950	0.36
30	315	340	0.25	375	610	0.56	395	720	0.38							408	750	0.72
31				380	690	0.38	360	510	0.66							388	700	0.38
32				435	1080	0.99	425	940	0.54							336	500	0.33
33				365	610	0.42										414	850	0.36
34																372	600	0.44
35																420	800	0.44
36																390	750	0.34
37																368	600	1.09
38																480	1250	0.57
39																402	700	0.51
40																374	600	0.34
41																440	1100	0.39
42																398	700	0.45
43																452	1200	0.40
44																458	800	0.59
45																316	350	0.92
46																448	1100	0.44
47																442	1050	0.44
48																354	550	0.39
49																388	600	0.34
50																414	750	0.38

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

Table 15. Mercury concentration of Camp 9 walleye, 1979-84, 1986.

Fish No	1979			1980			1981			1982			1983			1984			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	400	865	0.32	395	890	0.59	395	700	0.50	400	855	0.42	405	700	0.50	343	400	0.22	455	1000	0.54
2	420	1020	1.80	375	685	0.42	345	465	0.49	444	1000	0.34	410	725	0.63	337	450	0.34	429	850	0.30
3	420	995	0.40	430	950	0.41	350	505	0.51	385	700	0.65	390	725	0.54	304	250	0.30	403	690	0.43
4	395	850	0.59	375	620	0.46	360	560	0.39	360	600	0.41	425	- [1]	0.48	415	875	0.54	412	680	0.28
5	330	455	0.69	405	730	0.47	360	520	0.36	395	700	0.46	425	-	0.38	309	320	0.23	452	960	0.32
6	430	980	0.39	395	670	0.44				413	800	0.34	423	-	0.44	315	340	0.24	407	720	0.37
7	415	1020	0.51	445	650	0.55				405	700	0.55	400	-	0.50	308	290	0.37	392	675	0.42
8	370	600	0.34	380	665	0.54				365	650	0.58	412	-	0.39	252	140	0.46	398	720	0.29
9	400	720	0.48	370	600	0.37				385	650	0.62	403	725	0.63	322	350	0.27	403	780	0.29
10	425	995	0.44	420	980	0.54				350	500	0.51	392	610	0.41	408	760	0.48	425	790	0.38
11	455	1190	0.49	390	860	0.42				414	775	0.46	367	575	0.42	340	420	0.28	455	1150	0.40
12				340	480	0.71				418	800	0.32	366	560	0.40	364	540	0.29	399	760	0.25
13				340	430	0.76				400	700	0.58	396	720	0.48	324	340	1.22	368	590	0.60
14				370	690	0.72				428	775	0.40	330	440	0.27	360	480	0.34	380	670	0.20
15										470	1050	0.43	335	410	0.54	225	115	0.13	401	660	0.29
16										408	725	0.40	407	750	0.46	453	960	0.40	368	580	0.29
17										423	800	0.51	418	810	0.38	349	445	0.34	407	720	0.32
18										397	700	0.51	391	710	0.51	345	860	0.31	340	500	0.28
19										411	750	0.49	354	490	0.38	405	860	0.34	397	650	0.27
20										374	600	0.48	356	480	0.63	444	1110	0.45	413	800	0.50
21										385	600	0.49	395	625	0.51	439	1090	0.47	350	480	0.31
22										429	800	0.34				453	1245	0.86	382	640	0.34
23										431	800	0.49				445	1110	0.39	370	620	0.55
24										436	950	0.50				484	1330	0.40	377	575	0.37
25										432	850	0.54				386	720	0.25	410	745	0.34
26																			455	1050	0.59
27																			418	760	0.63

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

Table 16. Mercury concentration of Area 4 walleye, 1979-81, 1984.

Fish No	1979			1980			1981			1984		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	280	250	0.30	360	630	0.54	340	465	0.47	455	975	0.68
2	280	240	0.41	395	900	0.56	405	805	0.51	405	740	0.57
3	255	190	0.33	450	1185	0.73	335	430	0.47	435	1180	0.37
4				315	480	0.45	450	1145	0.82	430	1050	0.50
5							430	1060	0.76	418	1000	0.38
6							410	830	0.48	367	680	0.31
7							450	1170	0.57	446	1240	0.41
8							405	880	0.61	477	1450	0.44
9							380	830	0.42	432	1210	0.36
10							485	1500	0.61	418	1100	0.35
11							390	810	0.48	452	1300	0.46
12							455	1160	0.68	400	850	0.37
13							450	1265	0.61	445	1205	0.44
14							470	1380	0.53	445	1200	0.59
15							470	1310	0.79	427	1150	0.57
16							445	1060	0.42	417	1030	0.59
17							400	880	0.60	440	1225	0.42
18							445	1215	0.63	475	1590	0.41
19							440	1080	0.71	419	1070	0.39
20							305	365	0.42	450	1400	0.45
21										450	1340	0.39
22										470	1300	0.45
23										420	1100	0.64
24										420	1070	0.38
25										408	960	0.42

Table 17. Mercury concentration of Area 5 walleye, 1979, 1981-82, 1984-85.

Fish No	1979			1981			1982			1984			1985		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[1] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	410	843	0.58	460	1370	0.78	364	575	0.37	489	1250	1.05	412	800	0.67
2	403	882	0.57	330	390	0.69	487	1300	0.46	452	1050	0.88	455	1100	0.58
3	388	645	0.65	340	490	0.45	454	900	0.76	415	750	0.70	428	900	0.47
4	423	950	0.67	295	320	0.77	385	625	0.76	448	900	0.70	428	900	0.48
5	465	1190	0.72	340	400	0.61	396	775	1.05	511	1700	0.82	396	700	0.43
6	410	715	0.48	390	860	0.88	440	925	0.84	373	500	0.28	484	1350	0.72
7	420	819	0.57	315	350	0.53	345	450	0.69	426	800	0.47	455	1100	0.60
8	435	915	0.63	300	280	0.57	404	825	0.83	477	1250	0.71	455	1100	0.52
9	385	695	0.71	365	575	0.69	473	1375	0.84	385	500	0.68	448	1050	0.50
10	330	361	0.52	410	840	0.83	428	850	0.62	405	700	0.39	412	800	0.73
11	288	250	0.55	340	480	0.39	405	800	0.70	435	850	0.96	515	1650	0.81
12	262	202	0.43	435	1045	0.86	470	1150	0.85	424	800	0.53	484	1350	1.07
13	245	138	0.53	335	480	0.53	450	1050	0.69	366	500	0.45	428	900	0.33
14	235	125	0.42	270	230	0.52	448	1025	0.88	333	350	0.45	428	900	0.42
15	236	129	0.35	365	580	0.67	502	1450	0.81	304	250	0.34			
16	458	1207	0.44	300	280	0.40	438	925	0.73	371	500	0.64			
17	440	1092	0.60	440	1130	0.82	329	400	0.59	290	250	0.36			
18	395	788	0.52	315	380	0.51	417	875	0.79	260	150	0.31			
19	460	1119	0.51	255	195	0.70	458	950	0.39	230	100	0.26			
20	423	852	0.52	325	360	0.56	468	1150	0.72	213	75	0.25			
21	440	960	0.59	315	375	0.68	408	775	0.41	419	950	0.46			
22	418	780	0.68	330	425	0.79	435	925	0.73	453	1100	0.87			
23	421	838	0.67	420	850	0.77	400	700	0.55	425	900	0.54			
24	437	902	0.44	350	470	0.70	456	1125	0.79	444	1050	0.84			
25				435	1070	0.87				383	550	0.75			
26										308	300	0.45			

[1] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included Area 5 walleye data from all previous years.

Table 18. Mercury concentration of Issett Lake walleye, 1978, 1982-86.

Fish No	1978			1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth[2] (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	409	800	1.95	325	375	0.45	475	1200	1.91	466	1450	1.35	553	1900	1.81	347	470	0.70
2	374	640	1.26	339	450	0.38	435	1050	0.88	490	1400	1.54	558	1950	1.52	429	845	1.50
3	435	925	1.36	385	475	1.40	535	1900	2.41	345	500	0.43	430	900	0.33	560	2080	1.86
4	372	650	1.79	468	1225	1.69	450	1050	1.31	355	550	0.35	445	1000	1.57	500	1490	1.81
5	355	500	1.24	469	1375	-[1]	475	1200	1.55	347	500	0.28	413	800	1.02	435	1000	1.82
6				275	200	-	440	1050	2.37	370	600	0.27	417	825	0.39	216	100	0.16
7				390	625	-	463	1450	1.83	320	400	0.35	456	1075	0.63	457	1100	1.55
8				289	275	-	430	1150	0.68	334	400	1.04	511	1500	0.52	360	500	0.95
9				314	325	-	365	550	1.72	313	300	0.83	445	1000	0.42	408	720	1.95
10				310	275	0.81	455	1050	1.40	299	350	0.34	474	1200	0.58			
11				539	1825	2.52	505	1450	2.71	306	300	0.44	543	1800	1.36			
12				335	425	0.41	475	1300	1.43	299	350	0.69	619	2650	2.06			
13				353	400	1.31	440	1150	1.34	284	300	0.45						
14				290	250	-[1]	360	600	0.48	302	300	0.44						
15				403	750	1.63	390	700	0.96	300	300	0.71						
16				308	300	0.26	365	550	1.47	260	200	0.40						
17				281	225	0.34	470	1150	2.21	166	50	0.11						
18				326	325	1.45	600	2825	1.88	188	100	0.11						
19				348	450	0.22	445	1075	1.68	175	50	0.11						
20				304	300	0.27	385	650	0.65	168	50	0.09						
21				364	475	0.69	430	900	0.93	173	50	0.08						
22				323	225	0.25	470	1250	1.42	160	50	0.12						
23				279	225	0.20	570	2475	1.51	114	50	0.07						
24				276	225	0.25	500	1500	0.54									
25				335	350	0.41	375	550	-[2]									
26							415	750	0.43									
27							475	1250	1.31									
28							440	950	1.92									
29							400	725	1.28									
30							365	525	0.77									
31							420	800	0.35									
32							450	1025	0.99									
33							385	700	1.61									

[1] Fish with missing values are included in this table to maintain the continuity of sample numbers.

[2] Fork lengths were estimated from round weights by using a $\log_{10}$ fork length - $\log_{10}$ round weight linear regression, which included Issett Lake walleye data from all previous years.

Table 19. Mercury concentration of South Bay cisco, 1982-84, 1986.

Fish No	1982			1983			1984			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	223	400	0.20	340	650	0.12	354	540	0.37	307	500	0.22
2	280	325	0.13	335	550	0.17	352	640	0.21	303	340	0.07
3	294	325	0.11	310	500	0.30	270	300	0.20	380	850	0.28
4	338	500	0.43	347	600	0.24	320	500	0.27	374	650	0.68
5	204	125	0.16	365	825	0.58	270	280	0.11	290	330	0.19
6	245	175	0.21	300	400	0.34	335	550	0.24	273	250	0.19
7	251	225	0.16	360	725	0.16	295	395	0.35	341	550	0.20
8	255	200	0.16	347	575	0.24	220	125	0.12	292	340	0.10
9	266	275	0.18	350	775	0.28	145	50	0.08	355	690	0.20
10	265	200	0.10	313	475	0.19	150	50	0.06	333	530	0.22
11	272	225	0.20	335	550	0.17	380	950	0.34	357	620	0.24
12	265	250	0.10	350	600	0.08	323	410	0.08	307	430	0.23
13	249	200	0.11	285	350	0.19	297	360	0.13	325	450	0.16
14	263	225	0.35	290	375	0.14	285	300	0.14	278	310	0.16
15	245	200	0.16	270	300	0.22	364	780	0.28	313	390	0.11
16	258	225	0.20	270	275	0.16	320	450	0.17	331	470	0.16
17	226	150	0.13	300	400	0.23	294	340	0.11	380	830	0.26
18	255	225	0.26	385	1050	0.32	317	460	0.18	304	410	0.30
19	258	200	0.16	310	550	0.14	307	425	0.19	345	640	0.17
20	250	250	0.16	265	250	0.11	304	400	0.18	184	60	0.15
21	317	400	0.16	270	1050	0.57	289	330	0.12	335	530	0.15
22	239	200	0.16	325	550	0.26	289	385	0.21	303	350	0.16
23	263	250	0.11	310	500	0.39	308	420	0.39	313	430	0.31
24	247	275	0.20	320	550	0.21	318	475	0.12	293	390	0.12
25	250	225	0.25	280	325	0.18	275	300	0.24	307	425	0.14
26				330	600	0.36	345	540	0.24	308	450	0.26
27				320	450	0.25	310	495	0.24			
28				325	550	0.28	330	460	0.37			
29				330	550	0.17	305	450	0.20			
30				325	475	0.34	330	500	0.19			
31				305	500	0.17	294	430	0.28			
32				280	325	0.19	326	550	0.48			
33				340	600	0.25						
34				295	450	0.23						
35				295	350	0.18						
36				320	575	0.22						

Table 20. Mercury concentration of Channel cisco, 1982-83.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1983 Fork Lth (mm)	1983 Rnd Wt (g)	1983 Muscle [Hg] (µg/g)
1	271	200	0.19	327	550	0.24
2	231	175	0.12	362	800	0.16
3	277	250	0.12	275	300	0.06
4	253	175	0.31	296	425	0.11
5	278	200	0.15	321	500	0.14
6	293	375	0.22	343	525	0.22
7	272	225	0.25	350	750	0.37
8	256	200	0.08	310	400	0.25
9	249	200	0.23	286	375	0.06
10	252	175	0.17	308	450	0.17
11	259	200	0.14	326	550	0.20
12	230	125	0.23	279	350	0.14
13	259	200	0.28	320	500	0.33
14	275	250	0.11	330	625	0.26
15	259	225	0.12	342	600	0.27
16	227	150	0.08	317	600	0.18
17	233	175	0.19	264	275	0.07
18	236	200	0.08	307	450	0.08
19	255	200	0.21	305	500	0.13
20	244	175	0.10	291	375	0.09
21	234	175	0.13	305	400	0.10
22	276	275	0.11	306	425	0.15
23	278	250	0.05	310	500	0.13
24	240	175	0.14	283	350	0.16
25	339	550	0.19	290	375	0.14
26	313	425	0.20	330	500	0.32
27				320	450	0.17

Table 21. Mercury concentration of Camp 9 cisco, 1982-84, 1986.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1983 Fork Lth (mm)	1983 Rnd Wt (g)	1983 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	369	675	0.24	341	600	0.06	338	500	0.28	376	810	0.23
2	417	1100	0.68	367	900	0.16	257	200	0.14	267	240	0.12
3	292	350	0.28	368	525	0.50	250	200	0.11	273	285	0.11
4	291	275	0.14	313	400	0.17	237	150	0.16	313	330	0.43
5	280	250	0.13	342	650	0.11	222	150	0.14	127	10	0.05
6	310	450	0.35	298	350	0.12	350	850	0.29	318	360	0.26
7	331	550	0.39	315	475	0.05	305	360	0.24	330	560	0.18
8	348	650	0.36	304	400	0.11	265	250	0.19	332	650	0.16
9	345	500	0.42	342	525	0.31	293	340	0.17	305	345	0.21
10	306	450	0.16	298	325	0.13	318	525	0.28	326	510	0.26
11	298	300	0.20	272	275	0.08	330	550	0.25	147	10	0.05
12				263	250	0.08	288	290	0.18	320	420	0.10
13				297	375	0.09	342	700	0.47	296	370	0.17
14				257	250	0.16	306	350	0.18	347	540	0.51
15				314	425	0.09	304	375	0.13	275	275	0.07
16				265	250	0.17	292	300	0.15	282	300	0.18
17				309	475	0.04	330	495	0.63	339	700	0.14
18				253	225	0.16	312	460	0.07	279	300	0.09
19				254	225	0.12	299	345	0.14	288	310	0.12
20				265	250	0.12	287	260	0.25	276	260	0.23
21				265	250	0.21	278	300	0.11	173	40	0.04
22				266	275	0.14	288	325	0.08	276	260	0.06
23				254	250	0.20	303	330	0.17	337	490	0.18
24				244	200	0.15	268	275	0.11	357	660	0.14
25							319	460	0.12	318	440	0.38
26							287	340	0.19			
27							324	510	0.26			
28							290	370	0.14			
29							310	350	0.18			
30							256	260	0.10			
31							252	210	0.20			
32							266	230	0.19			
33							240	190	0.13			
34							214	145	0.09			
35							210	120	0.12			
36							325	550	0.22			
37							278	300	0.15			
38							288	400	0.11			
39							312	400	0.21			
40							345	650	0.09			
41							340	500	0.26			
42							288	350	0.20			
43							330	550	0.25			
44							294	400	0.27			
45							285	300	0.26			
46							278	300	0.08			
47							300	280	0.21			
48							318	450	0.24			
49							371	250	0.22			
50							250	200	0.19			

Table 22. Mercury concentration of Area 4 cisco, 1982, 1984, 1986.

Fish No	1982			1984			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	338	450	0.16	340	440	0.15	327	450	0.12
2	292	275	0.12	287	300	0.10	348	525	0.15
3	311	400	0.10	300	300	0.17	346	450	0.15
4	307	375	0.12	305	340	0.14	304	325	0.11
5	329	475	0.19	268	240	0.08	327	375	0.19
6	339	600	0.11	275	270	0.06	352	575	0.12
7	281	325	0.23	332	450	0.20	327	400	0.07
8	339	625	0.19	320	475	0.08	329	425	0.11
9	315	350	0.17	320	450	0.17	325	375	0.09
10	319	575	0.11	290	300	0.12	310	300	0.11
11	322	400	0.18	288	300	0.16	308	325	0.11
12	316	500	0.14	268	200	0.14	315	350	0.07
13	282	300	0.16	256	225	0.10	296	275	0.10
14	348	350	0.75	270	225	0.11	330	425	0.14
15	343	525	0.15	250	190	0.19	288	300	0.12
16	289	325	0.12	248	175	0.12	298	325	0.19
17	310	425	0.14	267	240	0.11	336	475	0.11
18	300	375	0.12	313	340	0.21	305	300	0.15
19	312	475	0.08	275	250	0.13	315	350	0.10
20	338	475	0.09	271	190	0.17	308	350	0.15
21	315	400	0.09	239	150	0.10	299	275	0.13
22	329	475	0.11				311	350	0.06
23	303	350	0.10				324	375	0.11
24	269	700	0.69				310	325	0.07
25							226	100	0.10
26							326	350	0.13
27							328	375	0.10
28							290	300	0.18
29							320	350	0.14
30							310	275	0.22
31							323	325	0.19
32							321	350	0.10
33							330	375	0.22
34							311	350	0.15
35							305	375	0.11
36							271	250	0.10

Table 23. Mercury concentration of Area 5 cisco, 1982, 1984.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)
1	344	575	0.16	375	850	0.22
2	254	250	0.10	345	650	0.22
3	295	350	0.12	288	300	0.22
4	341	575	0.20	260	200	0.15
5	373	750	0.17	234	100	0.29
6	378	775	0.48	242	150	0.13
7	263	275	0.21	233	150	0.14
8	325	450	0.17	227	100	0.18
9	317	450	0.14	222	100	0.19
10	295	350	0.25	417	850	0.29
11	265	250	0.18	216	100	0.32
12	280	300	0.07	200	50	0.12
13	261	225	0.15	190	50	0.18
14	308	405	0.11	188	50	0.10
15	332	625	0.12	215	100	0.17
16	345	550	0.13	170	50	0.17
17	320	550	0.11	168	50	0.10
18	316	450	0.19	164	50	0.15
19	345	600	0.12			
20	367	700	0.26			
21	360	825	0.18			
22	367	825	0.18			
23	336	700	0.19			
24	389	900	0.29			

Table 24. Mercury concentration of Issett Lake cisco, 1982-86.

Fish No	1982			1983			1984			1985			1986		
	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	369	900	0.56	315	525	0.20	382	1040	0.41	352	700	0.32	325	525	0.19
2	358	775	0.23	332	550	0.17	368	750	0.21	312	450	0.23	337	670	0.35
3	354	700	0.36	302	400	0.25	362	850	0.21	308	475	0.41	340	570	0.13
4	346	750	0.83	298	475	0.33	328	550	0.31	352	600	0.23	308	475	0.26
5	286	325	0.24	380	1000	0.31	392	1100	0.27	326	625	0.33	313	410	0.10
6	310	450	0.14	375	950	0.31	326	550	0.17	328	550	0.27	350	460	0.43
7	340	625	0.28	315	550	0.19	354	850	0.27	328	575	0.17	285	315	0.14
8	330	625	0.33	295	425	0.23	339	660	0.37	294	400	0.18	270	310	0.15
9	360	725	0.56	375	1050	0.18	324	550	0.36	344	700	0.27	303	410	0.09
10	380	950	0.63	340	700	0.13	339	630	0.23	292	450	0.16	296	400	0.14
11	360	900	0.46	358	700	0.63	321	475	0.25	314	625	0.13	350	540	0.16
12	333	600	0.36	332	600	0.32	352	675	0.27	364	800	0.40	338	560	0.21
13	353	750	0.60	335	625	0.20	318	475	0.39	304	450	0.17	316	430	0.14
14	333	550	0.32	340	650	0.27	352	740	0.47	282	400	0.21	283	325	0.17
15	387	1000	0.69	370	800	0.44	328	550	0.46	296	425	0.18	294	410	0.19
16	380	1000	0.55	330	600	0.23	332	560	0.34	418	1075	0.41	390	870	0.28
17	360	725	0.47	280	350	0.21	356	620	0.35	400	1000	0.25	367	790	0.08
18	361	700	0.51	330	525	0.29	385	1000	0.85	392	900	0.17	338	610	0.39
19	287	350	0.10	309	400	0.24	348	700	0.29	382	900	0.36	348	680	0.23
20	420	1275	0.84	318	400	0.14	355	760	0.37	332	500	0.35	327	575	0.24
21	410	1100	0.29	345	700	0.12	333	600	0.31	300	450	0.08	320	450	0.14
22	354	800	0.26	350	700	0.26	369	800	0.38	342	575	0.17	316	455	0.29
23	294	375	0.17	325	550	0.20	359	650	0.57	450	1425	0.32	327	515	0.13
24	411	1150	0.91	300	450	0.18	332	500	0.31	354	700	0.31	317	450	0.14
25							335	580	0.37	338	575	0.23	313	430	0.14
26										354	725	0.21	385	790	0.32
27										296	400	0.27	340	600	0.38
28										350	750	0.13	366	775	0.45
29										378	775	0.26	400	945	0.43
30										358	650	0.29	350	620	0.18
31										370	625	0.62	297	350	0.07
32										328	525	0.09	315	450	0.18
33										332	600	0.12	350	560	0.08
34										362	775	0.22	290	350	0.16
35										330	500	0.22	325	425	0.81
36										302	425	0.12	330	490	0.24
37										284	350	0.12			
38										384	875	0.27			
39										394	400	0.15			
40										364	750	0.26			
41										430	1250	0.46			
42										344	575	0.28			
43										326	575	0.15			
44										390	875	0.42			
45										310	500	0.17			
46										404	1200	0.20			
47										338	525	0.25			
48										332	625	0.27			
49										334	625	0.34			
50										338	575	0.28			

Table 25. Mercury concentration of South Bay longnose sucker, 1982, 1984, 1986.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	448	1350	0.05	464	1520	0.13	430	1150	0.08
2	423	1250	0.06				457	1680	0.14
3	438	1350	0.08				424	1150	0.16
4	387	925	0.05				458	1510	0.12
5	330	500	0.04				465	1370	0.14
6	384	775	0.11				487	1710	0.09
7	364	750	0.05				472	1490	0.16
8							478	1650	0.42
9							502	1750	0.30
10							467	1550	0.12
11							409	1050	0.08
12							400	970	0.11
13							398	1090	0.15
14							530	2120	0.24
15							485	1580	0.22
16							339	530	0.13
17							397	960	0.08

Table 26. Mercury concentration of Channel longnose sucker, 1982-83.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1983 Fork Lth (mm)	1983 Rnd Wt (g)	1983 Muscle [Hg] (µg/g)
1	528	2075	0.20	470	1500	0.12
2	429	1075	0.15	465	1500	0.11
3	449	1475	0.10	400	1100	0.07
4	458	1450	0.14	395	1050	0.04
5	430	1125	0.08	455	1325	0.08
6	444	1200	0.09	405	1150	0.02
7	434	1050	0.08	500	1550	0.15
8	422	950	0.16	460	1325	0.06
9	456	1375	0.10	350	675	0.10
10	526	2040	0.21	425	1200	0.11
11	413	1050	0.12	405	925	0.04
12	458	1550	0.12	400	850	0.02
13	424	1100	0.10	380	800	0.03
14	445	1800	0.10	365	650	0.07
15	456	1250	0.07	385	850	0.05
16	466	1550	0.11	370	775	0.02
17	451	1225	0.10			
18	468	1550	0.10			
19	541	2600	0.17			
20	437	1175	0.13			
21	436	1300	0.14			
22	447	1250	0.09			
23	490	1825	0.09			
24	452	1225	0.12			

Table 27. Mercury concentration of Camp 9 longnose sucker, 1982-84, 1986.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1983 Fork Lth (mm)	1983 Rnd Wt (g)	1983 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	495	1900	0.09	435	1250	0.09	480	1700	0.16	460	1420	0.10
2	400	1200	0.08	485	1550	0.09	470	1400	0.13	415	1200	0.07
3	430	1400	0.08	485	1750	0.14	443	1400	0.09	408	1040	0.07
4	468	1800	0.08	475	1750	0.08	450	1350	0.15	419	1150	0.10
5	450	1500	0.08	380	925	0.09	460	1500	0.13	450	1560	0.08
6	395	1100	0.06	450	1475	0.16	437	1100	0.11	407	950	0.14
7	420	1150	0.07	435	1550	0.11	477	1450	0.11	445	1260	0.11
8	399	1150	0.04	470	1625	0.06	443	1200	0.12	447	1410	0.10
9	425	1300	0.05	335	600	0.09	452	1300	0.05	434	1110	0.07
10	414	1050	0.12	330	600	0.06	378	750	0.07	435	1500	0.07
11	387	1000	0.07	315	450	0.05	460	1450	0.14	487	1700	0.15
12	502	2000	0.12	405	1075	0.06	359	600	0.09	393	1030	0.13
13	399	1100	0.08	460	1500	0.04	432	1250	0.07	421	1210	0.13
14	415	1000	0.06	405	1175	0.04	407	900	0.08	374	840	0.07
15	456	1500	0.06	445	1550	0.06	450	1500	0.12	420	1080	0.10
16	410	1200	0.06	455	575	0.09	409	1150	0.09	419	1160	0.08
17	380	900	0.06	510	2075	0.14	430	1350	0.10	439	1450	0.10
18	380	900	0.05	410	1300	0.06	440	1500	0.13	410	1110	0.09
19	465	1500	0.08	490	1900	0.12	442	1450	0.09	475	1470	0.13
20	423	1500	0.09	396	900	0.08	525	2200	0.18	437	1540	0.12
21	445	1650	0.08	440	1590	0.06	465	1850	0.20	415	1090	0.06
22	430	1250	0.15	435	1525	0.07	521	2100	0.13	419	1230	0.08
23	400	1200	0.08	440	1300	0.09	329	500	0.05	413	1270	0.09
24	414	1150	0.06	390	850	0.09	487	1700	0.13	428	1150	0.10
25	425	1250	0.09	400	950	0.07	416	1075	0.09	456	1475	0.10
26							483	1570	0.24	462	1590	0.06
27							411	1050	0.09	380	880	0.09
28							364	700	0.08	421	1240	0.14
29							395	780	0.07	478	1650	0.11
30							449	1240	0.09	447	1290	0.09
31							430	1090	0.08	432	1175	0.11
32							417	1250	0.10	445	1310	0.08
33							369	800	0.08	440	1430	0.06
34							450	1450	0.08	460	1450	0.15
35							447	1500	0.09			
36							402	1100	0.07			
37							371	800	0.08			
38							335	550	0.07			
39							320	450	0.08			
40							314	450	0.05			
41							283	350	0.06			

Table 28. Mercury concentration of Area 4 longnose sucker, 1982, 1984, 1986.

	1982			1984			1986		
Fish No	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)	Fork Lth (mm)	Rnd Wt (g)	Muscle [Hg] (µg/g)
1	448	1275	0.14	443	1300	0.11	475	1330	0.24
2	456	1325	0.11	455	1250	0.11	425	1150	0.16
3	469	1375	0.14	500	1600	0.34	460	1250	0.29
4	427	1200	0.09	470	1550	0.09	458	1330	0.31
5	419	1125	0.07	425	1200	0.12	451	1325	0.17
6	452	1200	0.13	410	1100	0.07	452	1330	0.30
7	473	1800	0.15	495	1650	0.24	488	1500	0.22
8	420	1125	0.12	421	1125	0.10	409	1030	0.14
9	452	1100	0.19	465	1390	0.47	452	1180	0.34
10	437	1250	0.15	445	1180	0.10	480	1525	0.22
11	448	1200	0.14	330	500	0.10	448	1225	0.28
12	512	1850	0.17	333	440	0.10	452	1290	0.33
13	459	1250	0.10	446	1340	0.08	463	1220	0.32
14	484	1400	0.20	420	1010	0.11	480	1630	0.27
15	403	925	0.07	527	2150	0.26	439	1240	0.20
16	425	1250	0.10	300	460	0.07	447	1280	0.27
17	523	1700	0.23	417	1060	0.09	433	1230	0.12
18	470	1250	0.19	310	400	0.05	481	1525	0.27
19	467	1350	0.20	412	975	0.06	452	1140	0.32
20	529	1800	0.16	372	850	0.06	436	1090	0.27
21	438	1200	0.18	400	1050	0.07	450	1180	0.20
22	550	1950	0.30	328	490	0.07	416	960	0.25
23	488	2000	0.14	517	1825	0.16	504	2150	0.41
24	474	1500	0.11	352	610	0.09	506	1790	0.39
25				447	1425	0.12	475	1600	0.25
26							450	1320	0.13
27							485	1625	0.23
28							415	1175	0.08
29							404	1125	0.07
30							378	1075	0.07
31							353	725	0.07
32							415	1000	0.09
33							405	975	0.14
34							407	1025	0.10
35							393	975	0.07
36							372	925	0.08

Table 29. Mercury concentration of Area 5 longnose sucker, 1982, 1984.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)
1	465	1125	0.19	529	1900	0.26
2	413	1000	0.10	425	950	0.12
3	396	950	0.13	451	1150	0.27
4	438	1000	0.09	471	1200	0.25
5	436	975	0.18	440	1050	0.11
6	426	950	0.12			
7	432	1150	0.12			
8	416	925	0.14			
9	438	1100	0.18			
10	385	875	0.11			
11	368	675	0.09			
12	453	1400	0.09			
13	451	1250	0.07			
14	418	1125	0.10			
15	430	1200	0.07			
16	439	950	0.13			
17	449	1250	0.11			
18	437	1100	0.22			
19	468	1400	0.17			
20	440	1025	0.11			
21	504	1525	0.25			
22	460	1200	0.26			
23	476	1300	0.25			
24	431	1050	0.20			

Table 30. Mercury concentration of Issett Lake longnose sucker, 1982, 1986.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	491	1825	0.07	374	820	0.06
2	410	1075	0.15	378	840	0.07
3	485	2100	0.12	440	360	0.08
4	444	1500	0.17	363	650	0.05
5				415	1015	0.13
6				423	1360	0.04
7				450	1575	0.15

Table 31. Mercury concentration of South Bay burbot, 1984, 1986.

Fish No	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	495	825	0.19	534	740	0.37
2				493	660	0.18
3				471	540	0.21
4				426	520	0.29
5				457	620	0.33
6				481	690	0.36
7				855	4950	1.48
8				590	1450	0.28
9				455	700	0.20
10				497	720	0.28
11				630	1750	0.29
12				502	775	0.24
13				604	1560	0.22

Table 32. Mercury concentration of Channel burbot, 1982.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)
1	402	450	0.15
2	586	550	0.26
3	493	800	0.14
4	475	900	0.17

Table 33. Mercury concentration of Camp 9 burbot, 1983-84, 1986.

Fish No	1983 Fork Lth (mm)	1983 Rnd Wt (g)	1983 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	565	1275	0.23	610	1700	0.38	653	1700	0.99
2	559	1250	0.16	568	1325	0.17	543	930	0.28
3	529	1325	0.30	580	1210	0.32	472	680	0.21
4	406	525	0.07	653	1425	0.60	460	625	0.21
5	410	400	0.13	225	90	0.07	608	1375	0.28
6				604	1350	0.20	595	1450	0.22
7				515	900	0.17	546	820	0.21
8				525	1050	0.19	585	1070	0.35
9				470	750	0.10	520	850	0.19
10				418	500	0.16	495	720	0.28
11				419	450	0.15	525	840	0.26
12				220	50	0.14	502	800	0.17
13							620	1360	0.28
14							600	1340	0.33

Table 34. Mercury concentration of Area 4 burbot, 1982, 1984, 1986.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	607	1350	0.39	543	740	0.36	569	1175	0.32
2	420	450	0.27	568	1140	0.18	538	900	0.38
3	493	775	0.14				567	1150	0.18
4	521	850	0.16				560	1150	0.23
5	502	850	0.27				585	1250	0.34
6	522	875	0.24				598	1075	0.40
7	462	850	0.28				618	1275	0.36
8	538	1000	0.20				582	1275	0.32
9	500	750	0.32				643	1450	0.21
10	528	875	0.26				554	975	0.16
11	500	875	0.20				505	800	0.28
12	548	1000	0.21				491	775	0.18
13	435	550	0.30				557	1200	0.26
14	483	750	0.22				590	1325	0.17
15	489	825	0.13				590	1000	0.43
16	542	1050	0.30				571	1175	0.34
17	528	1150	0.21				606	1350	0.26
18	619	1600	0.22				646	1750	0.12
19	573	1100	0.18				658	1875	0.36
20	621	1350	0.14				571	1050	0.36
21	514	825	0.21				692	2225	0.54
22	516	850	0.26				682	1975	0.62
23	591	1100	0.32						
24	543	850	0.12						

Table 35. Mercury concentration of Area 5 burbot, 1982 and 1984.

Fish No	1982 Fork Lth (mm)	1982 Rnd Wt (g)	1982 Muscle [Hg] (µg/g)	1984 Fork Lth (mm)	1984 Rnd Wt (g)	1984 Muscle [Hg] (µg/g)
1	516	925	0.32	694	1500	0.50
2	468	850	0.39	625	1350	0.41
3	618	1550	0.42	541	800	0.35
4	562	1375	0.38	522	800	0.42
5	476	650	0.28	484	700	0.46
6	442	650	0.27	602	750	0.73
7	355	300	0.12			
8	495	750	0.25			
9	551	1050	0.29			
10	554	875	0.36			
11	496	800	0.34			
12	615	625	0.31			
13	525	1050	0.30			

Table 36. Mercury concentration of Issett Lake burbot, 1986.

Fish No	1986 Fork Lth (mm)	1986 Rnd Wt (g)	1986 Muscle [Hg] (µg/g)
1	643	900	0.34
2	595	425	0.35
3	600	350	0.32
4	610	360	0.25
5	747	2675	0.38
6	670	1700	0.46
7	571	1170	0.33
8	584	1300	0.40
9	470	750	0.22
10	550	1220	0.26
11	588	1760	0.18
12	627	1950	0.26
13	517	870	0.22
14	277	140	0.13
15	304	170	0.14

Table 37. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for whitefish for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1975	25	329	75	170-430	728	382	150-1290	0.07	0.03	0.03-0.12
	1979	30	386	44	290-455	1073	424	405-1990	0.31	0.13	0.05-0.55
	1980	20	333	40	255-400	689	291	225-1160	0.20	0.10	0.04-0.44
	1981	26	327	38	250-380	650	242	245-1090	0.14	0.09	0.03-0.38
	1982	37	325	42	234-400	588	239	175-1050	0.11	0.08	0.01-0.36
	1983	28	352	41	295-455	721	293	350-1525	0.15	0.06	0.06-0.29
	1984	38	379	47	295-457	893	371	400-1960	0.16	0.08	0.04-0.34
	1985	50	329	48	237-443	634	284	225-1450	0.09	0.07	0.01-0.27
	1986	50	354	48	258-458	704	322	260-1640	0.13	0.07	0.03-0.36
Channel	1975	50	332	74	170-480	724	410	150-2110	0.06	0.02	0.03-0.12
	1979	17	423	44	315-500	1438	533	470-2420	0.30	0.16	0.06-0.58
	1980	26	339	79	185-460	804	520	105-1915	0.25	0.17	0.04-0.55
	1981	24	335	53	255-445	711	374	245-1490	0.21	0.11	0.02-0.42
	1982	25	342	50	260-435	752	365	295-1590	0.20	0.08	0.04-0.34
	1983	31	327	62	173-450	549	332	50-1600	0.09	0.07	0.02-0.32
	1984	34	375	46	271-497	920	457	300-2900	0.15	0.09	0.02-0.44
	1986	44	382	46	274-490	890	375	350-1950	0.15	0.12	0.02-0.50
Camp 9	1975	25	335	74	180-480	721	444	160-2110	0.05	0.01	0.03-0.08
	1979	40	401	33	350-480	1014	321	540-1970	0.13	0.06	0.06-0.26
	1980	28	379	51	290-500	860	309	340-1695	0.13	0.13	0.04-0.59
	1981	24	351	31	290-410	818	252	400-1300	0.10	0.08	0.04-0.35
	1982	25	401	25	360-450	1058	249	700-1700	0.09	0.07	0.03-0.27
	1983	26	385	38	298-447	1007	314	450-1600	0.09	0.05	0.01-0.21
	1984	46	312	52	166-399	472	227	50-1100	0.09	0.07	0.02-0.39
	1986	39	389	56	292-505	927	428	320-1870	0.10	0.06	0.04-0.28
Area 4	1975	25	316	80	180-425	594	334	150-1100	0.05	0.02	0.02-0.10
	1978	16	338	72	205-420	663	349	90-1230	0.22	0.09	0.09-0.38
	1979	60	370	59	220-525	762	339	140-1970	0.10	0.04	0.06-0.30
	1980	27	370	31	300-420	1008	259	492-1680	0.14	0.08	0.05-0.37
	1981	67	358	47	280-460	725	366	250-1970	0.08	0.04	0.03-0.32
	1982	25	390	45	227-454	929	243	500-1475	0.11	0.04	0.06-0.21
	1983	24	349	43	282-418	746	329	340-1450	0.05	0.04	<0.01-0.15
	1984	47	379	55	232-495	870	377	140-1675	0.10	0.07	0.01-0.49
	1985	25	351	55	237-416	704	308	200-1100	0.12	0.07	0.04-0.32
	1986	51	409	34	324-504	1202	340	573-2400	0.09	0.02	0.05-0.17
Area 5	1975	25	349	74	190-440	792	357	185-1350	0.07	0.02	0.04-0.12
	1981	25	397	28	350-480	1014	238	665-1740	0.26	0.10	0.12-0.42
	1982	24	388	48	317-485	864	328	450-1825	0.19	0.08	0.06-0.36
	1984	50	408	32	318-469	962	250	350-1600	0.20	0.08	0.10-0.46
Issett L.	1975	24	369	41	300-435	1060	308	550-1470	0.15	0.04	0.02-0.30
	1978	5	310	24	271-335	405	97	250- 500	0.32	0.10	0.17-0.40
	1982	25	384	30	331-441	900	276	375-1375	0.21	0.06	0.12-0.36
	1983	24	406	19	370-445	1136	185	750-1600	0.17	0.05	0.06-0.28
	1984	47	405	47	309-535	1103	415	400-2250	0.23	0.13	0.05-0.89
	1985	50	435	38	326-494	1407	381	650-2100	0.25	0.11	0.05-0.53
	1986	54	363	47	273-508	790	384	350-2410	0.09	0.08	0.02-0.41

Table 38. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for northern pike for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1978	15	666	113	545- 894	2325	1398	1200- 5750	0.77	0.39	0.28-1.72
	1979	60	530	62	380- 640	1209	452	315- 2155	0.69	0.18	0.42-1.21
	1980	34	537	49	450- 680	1170	357	670- 2685	0.78	0.36	0.42-2.55
	1981	25	554	41	480- 665	1323	343	810- 2090	0.89	0.12	0.65-1.15
	1982	28	552	62	412- 684	1154	460	450- 2625	0.96	0.28	0.38-1.54
	1983	23	556	79	386- 709	1252	586	350- 2725	0.83	0.44	0.15-2.15
	1984	36	548	68	280- 640	1065	348	150- 1850	1.18	0.54	0.26-2.53
	1985	50	541	63	429- 707	1168	427	550- 2550	0.67	0.22	0.26-1.11
	1986	31	562	44	493- 682	1129	363	690- 2260	0.86	0.33	0.34-1.74
Channel	1979	35	497	77	350- 640	917	432	310- 1900	0.57	0.17	0.29-0.89
	1980	38	532	82	310- 655	1205	377	500- 2130	0.57	0.24	0.05-1.11
	1981	25	520	45	450- 610	1054	284	680- 1635	0.64	0.13	0.42-1.00
	1982	25	543	49	446- 651	1024	361	525- 1950	0.77	0.15	0.48-1.09
	1983	36	546	55	427- 685	1133	323	650- 2075	0.65	0.26	0.05-1.35
	1985	44	546	69	308- 736	1108	414	450- 2650	0.75	0.31	0.20-1.65
	1986	101	523	47	409- 720	902	275	415- 2225	0.63	0.18	0.18-1.09
Camp 9	1979	35	554	88	440- 810	1372	858	620- 5000	0.58	0.17	0.36-1.10
	1980	31	566	75	430- 780	1326	587	660- 3730	0.61	0.13	0.41-1.01
	1981	24	544	61	450- 705	1156	436	625- 2550	0.66	0.15	0.43-0.96
	1982	24	605	63	525- 745	1545	642	950- 3450	0.68	0.14	0.43-0.96
	1983	25	600	65	515- 786	1509	663	975- 3720	0.68	0.14	0.42-1.07
	1984	46	484	101	329- 807	824	632	235- 3950	0.57	0.25	0.16-1.36
	1986	24	592	78	475- 820	1391	708	690- 3940	0.80	0.15	0.51-1.06
Area 4	1979	54	528	112	320-1030	1276	1577	280-11465	0.49	0.17	0.30-1.20
	1980	28	539	80	420- 805	1355	798	600- 4450	0.64	0.12	0.45-0.91
	1981	25	552	90	465- 930	1363	1271	680- 7300	0.72	0.20	0.19-1.13
	1982	24	582	61	429- 708	1367	466	500- 2600	0.63	0.12	0.35-0.82
	1984	25	500	88	386- 683	878	531	340- 2300	0.63	0.19	0.21-0.98
	1985	46	559	45	487- 669	1274	340	800- 2200	0.74	0.24	0.27-1.32
	1986	36	592	77	454- 791	1425	639	650- 3225	0.68	0.19	0.29-1.40
Area 5	1979	40	484	100	261- 675	881	472	185- 1970	0.61	0.16	0.34-1.13
	1981	25	537	58	440- 650	1175	374	665- 2045	0.68	0.16	0.40-1.01
	1982	24	571	52	452- 690	1227	297	600- 2000	0.79	0.21	0.39-1.23
	1984	31	472	97	290- 645	752	426	125- 1600	0.50	0.25	0.19-1.05
	1985	3	542	58	499- 609	1100	350	850- 1500	0.35	0.07	0.29-0.42
Issett L.	1978	5	573	55	476- 608	1350	382	725- 1750	0.61	0.15	0.37-0.74
	1982	26	598	136	410- 830	1812	1347	425- 5000	0.90	0.38	0.36-1.75
	1983	35	658	98	495- 875	2450	1319	850- 5775	1.04	0.32	0.50-2.28
	1984	27	609	133	333- 950	1922	1563	250- 7650	1.09	0.55	0.40-2.30
	1985	50	719	124	510- 914	3100	1716	900- 6800	1.12	0.37	0.45-2.01
	1986	32	611	144	354- 955	2011	1744	450- 7260	0.90	0.40	0.20-1.65

Table 39. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for walleye for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1978	15	435	54	342-555	921	282	500-1500	0.80	0.30	0.46-1.20
	1979	51	365	56	210-460	723	364	135-1905	0.47	0.27	0.06-1.14
	1980	28	376	34	335-460	635	171	420-1170	0.59	0.17	0.33-1.03
	1981	26	382	24	340-425	671	141	475-1060	0.64	0.30	0.32-1.94
	1982	25	355	47	250-438	494	210	150- 950	0.77	0.42	0.31-1.66
	1983	36	390	44	227-440	669	183	100- 950	0.56	0.23	0.18-1.38
	1984	25	385	44	304-494	657	250	300-1500	0.65	0.26	0.38-1.49
	1985	50	369	58	255-502	628	287	200-1450	0.69	0.38	0.19-1.66
	1986	4	393	14	373-405	673	69	570- 720	0.50	0.08	0.43-0.61
Channel	1979	30	333	57	180-465	476	273	50-1270	0.47	0.36	0.25-2.19
	1980	33	393	33	330-455	756	194	440-1180	0.56	0.31	0.29-2.04
	1981	32	387	31	325-430	711	183	350- 960	0.55	0.22	0.32-1.22
	1982	24	384	45	256-456	669	198	300-1100	0.45	0.24	0.23-1.41
	1983	25	388	49	275-465	692	233	250-1300	0.50	0.31	0.25-1.76
	1985	50	398	37	316-458	771	210	350-1250	0.47	0.25	0.26-1.46
Camp 9	1979	11	405	33	330-455	881	214	455-1190	0.59	0.42	0.32-1.80
	1980	14	388	30	340-445	707	163	430- 980	0.53	0.13	0.37-0.76
	1981	5	362	20	345-395	550	90	465- 700	0.45	0.07	0.36-0.51
	1982	25	406	28	350-470	753	127	500-1050	0.47	0.09	0.32-0.65
	1983	21	390	28	330-425	628	123	410- 810	0.47	0.09	0.27-0.63
	1984	25	365	66	225-484	632	362	115-1330	0.40	0.22	0.13-1.22
	1986	27	402	31	340-455	734	159	480-1150	0.38	0.12	0.20-0.63
Area 4	1979	3	272	14	255-280	227	32	190- 250	0.35	0.06	0.30-0.41
	1980	4	380	57	315-450	799	311	480-1185	0.57	0.12	0.45-0.73
	1981	20	418	49	305-485	982	313	365-1500	0.58	0.12	0.42-0.82
	1984	25	433	25	367-477	1137	210	680-1590	0.45	0.10	0.31-0.68
Area 5	1979	24	384	75	235-465	725	342	125-1207	0.56	0.10	0.35-0.72
	1981	25	351	56	255-460	569	318	195-1370	0.66	0.15	0.39-0.88
	1982	24	428	44	329-502	913	266	400-1450	0.70	0.17	0.37-1.05
	1984	26	386	79	213-511	695	406	75-1700	0.58	0.23	0.25-1.05
	1985	14	445	33	396-514	1043	261	700-1650	0.60	0.19	0.33-1.07
Issett L.	1978	5	389	32	355-435	703	163	500- 925	1.52	0.33	1.24-1.95
	1982	25	345	67	275-539	494	402	200-1825	0.79	0.67	0.20-2.52
	1983	33	444	57	360-600	1106	514	525-2825	1.37	0.61	0.35-2.71
	1984	23	284	97	114-490	374	375	50-1450	0.46	0.40	0.07-1.54
	1985	12	489	67	412-619	1383	579	800-2650	1.02	0.62	0.33-2.06
	1986	9	412	99	216-560	923	592	100-2080	1.36	0.62	0.16-1.95

Table 40. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for cisco for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1982	25	259	28	204-338	250	84	125- 500	0.18	0.08	0.10-0.43
	1983	36	317	30	265-385	533	184	250-1050	0.24	0.11	0.08-0.58
	1984	32	301	51	145-380	426	179	50- 950	0.22	0.10	0.06-0.48
	1986	26	317	40	184-380	470	174	60- 850	0.21	0.11	0.07-0.68
Channel	1982	26	261	26	227-339	228	92	125- 550	0.16	0.07	0.05-0.31
	1983	27	311	24	264-362	478	124	275- 800	0.17	0.08	0.06-0.37
Camp 9	1982	11	326	41	280-417	505	244	250-1100	0.30	0.16	0.13-0.68
	1983	24	294	38	244-368	380	170	200- 900	0.15	0.10	0.04-0.50
	1984	50	293	36	210-371	359	150	120- 850	0.19	0.10	0.07-0.63
	1986	25	291	61	127-376	379	205	10- 810	0.18	0.12	0.04-0.51
Area 4	1982	24	314	21	269-348	439	109	275- 700	0.18	0.17	0.08-0.75
	1984	21	285	28	239-340	288	97	150- 475	0.13	0.04	0.06-0.21
	1986	36	314	23	226-352	355	82	100- 575	0.13	0.04	0.06-0.22
Area 5	1982	24	324	40	254-389	529	205	225- 900	0.18	0.08	0.07-0.48
	1984	18	242	72	164-417	219	270	50- 850	0.19	0.06	0.10-0.32
Issett L.	1982	24	353	36	286-420	754	250	325-1275	0.45	0.23	0.10-0.91
	1983	24	331	27	280-380	611	191	350-1050	0.25	0.11	0.12-0.63
	1984	25	348	21	318-392	689	173	475-1100	0.35	0.14	0.17-0.85
	1985	50	345	39	282-450	656	233	350-1425	0.25	0.11	0.08-0.62
	1986	36	328	30	283-400	528	158	310- 945	0.23	0.15	0.07-0.81

Table 41. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for longnose sucker for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1982	7	396	42	330-448	986	335	500-1350	0.06	0.02	0.04-0.11
	1984	1	-	-	464	-	-	1520	-	-	0.13
	1986	17	447	48	339-530	1371	389	530-2120	0.16	0.09	0.08-0.42
Channel	1982	24	457	34	413-541	1428	397	950-2600	0.12	0.04	0.07-0.21
	1983	16	414	44	350-500	1077	302	650-1550	0.07	0.04	0.02-0.15
Camp 9	1982	25	425	33	380-502	1306	298	900-2000	0.08	0.02	0.04-0.15
	1983	25	427	51	315-510	1272	446	450-2075	0.08	0.03	0.04-0.16
	1984	41	422	55	283-525	1192	443	350-2200	0.10	0.04	0.05-0.24
	1986	34	432	26	374-487	1277	219	840-1700	0.10	0.03	0.06-0.15
Area 4	1982	24	463	37	403-550	1392	297	925-2000	0.15	0.05	0.07-0.30
	1984	25	418	64	300-527	1117	461	400-2150	0.13	0.10	0.05-0.47
	1986	36	442	37	353-506	1262	275	725-2150	0.21	0.10	0.07-0.41
Area 5	1982	24	436	29	368-504	1104	191	675-1525	0.15	0.06	0.07-0.26
	1984	5	463	40	425-529	1250	376	950-1900	0.20	0.08	0.11-0.27
Issett L.	1982	4	458	38	410-491	1625	441	1075-2100	0.13	0.04	0.07-0.17
	1986	7	406	34	363-450	946	414	360-1575	0.08	0.04	0.04-0.15

Table 42. Mean fork lengths, mean round weights, and mean muscle mercury concentrations for burbot for all sites and years.

Site	Year	n	Fork length			Round weight			Muscle [Hg]		
			mean	s.d.	range	mean	s.d.	range	mean	s.d.	range
South Bay	1984	1	-	-	495	-	-	825	-	-	0.19
	1986	13	538	114	426-855	1206	1198	520-4950	0.36	0.34	0.18-1.48
Channel	1982	4	489	76	402-586	675	210	450- 900	0.18	0.05	0.14-0.26
Camp 9	1983	5	494	80	406-565	955	453	400-1325	0.18	0.09	0.07-0.30
	1984	12	484	142	220-653	900	538	50-1700	0.22	0.15	0.07-0.60
	1986	14	552	59	460-653	1040	341	625-1700	0.30	0.20	0.17-0.99
Area 4	1982	24	525	52	420-621	938	252	450-1600	0.23	0.07	0.12-0.39
	1984	2	-	-	543-568	-	-	740-1140	-	-	0.18-0.36
	1986	22	590	51	491-692	1281	375	775-2225	0.31	0.12	0.12-0.62
Area 5	1982	13	513	71	355-618	881	327	300-1550	0.31	0.08	0.12-0.42
	1984	6	578	77	484-694	983	347	700-1500	0.48	0.13	0.35-0.73
Issett L.	1986	15	557	126	277-747	1049	736	140-2675	0.28	0.10	0.13-0.40

Table 43. Mean muscle mercury concentrations of whitefish, standardized to a fixed fork length (350 mm), by using log fork length - log [Hg] linear regression.

Year	Site					
	South Bay	Channel	Camp 9	Area 4	Area 5	Issett Lake
1975	0.07	0.06	0.05	0.05	0.07	0.14
1978	-	0.15	-	0.21	-	0.24
1979	0.24	0.20	0.08	0.09	-	-
1980	0.17	0.18	0.09	0.13	-	-
1981	0.14	0.19	0.09	0.05	0.26	-
1982	0.09	0.07	0.06	0.09	0.16	0.19
1983	0.14	0.08	0.05	0.04	-	0.11
1984	0.12	-	0.09	0.08	0.16	0.14
1985	0.08	0.07	-	0.10	-	0.10
1986	0.11	-	0.08	0.07	-	0.06

Table 44. Mean muscle mercury concentrations of northern pike, standardized to a fixed fork length (550 mm), by using log fork length - log [Hg] linear regression.

Year	Site					
	South Bay	Channel	Camp 9	Area 4	Area 5	Issett Lake
1978	0.61	-	-	-	-	0.54
1979	0.68	0.63	0.57	0.50	0.65	-
1980	0.75	0.57	0.60	0.63	-	-
1981	0.88	0.62	0.65	0.70	0.69	-
1982	0.92	0.77	0.65	0.61	0.75	0.76
1983	0.72	0.60	0.65	-	-	0.85
1984	1.09	-	0.69	0.61	0.61	0.86
1985	0.65	0.71	-	0.68	-	0.73
1986	0.77	0.65	0.75	0.60	-	0.69

Table 45. Mean muscle mercury concentrations of walleye, standardized to a fixed fork length (400 mm), by using log fork length - log [Hg] linear regression.

Year	Site					
	South Bay	Channel	Camp 9	Area 4	Area 5	Issett Lake
1978	0.75	-	-	-	-	1.52
1979	0.48	0.49	0.51	0.44	0.56	-
1980	0.65	0.54	0.49	0.61	-	-
1981	0.68	0.54	0.46	0.54	0.73	-
1982	0.58	0.42	0.47	-	0.66	1.02
1983	0.54	0.45	0.47	-	-	1.02
1984	0.63	-	0.40	0.42	0.59	0.77
1985	0.58	0.44	-	-	0.44	0.44
1986	0.51	-	0.36	-	-	1.13

Table 46. Mean muscle mercury concentrations of whitefish, adjusted by log fork length - log [Hg] analysis of covariance, 1975-86.

Year	Site					
	South Bay	Channel	Camp 9	Area 4	Area 5	Issett Lake
1975	0.07	0.05	0.05	0.05	0.07	0.16
1978	-	0.23	-	0.21	-	0.55
1979	0.24	0.24	0.10	0.09	-	-
1980	0.18	0.16	0.10	0.13	-	-
1981	0.12	0.18	0.09	0.07	0.24	-
1982	0.09	0.07	0.07	0.10	0.17	0.21
1983	0.13	0.10	0.07	0.04	-	0.15
1984	0.12	-	0.09	0.08	0.18	0.19
1985	0.08	0.10	-	0.10	-	0.17
1986	0.11	-	0.09	0.08	-	0.08

Table 47. Mean muscle mercury concentrations of northern pike, adjusted by log fork length - log [Hg] analysis of covariance, 1978-86.

Year	Site					
	South Bay	Channel	Camp 9	Area 4	Area 5	Issett Lake
1978	0.56	-	-	-	-	0.55
1979	0.70	0.63	0.56	0.49	0.64	-
1980	0.75	0.49	0.58	0.64	-	-
1981	0.87	0.64	0.65	0.69	0.61	-
1982	0.92	0.71	0.60	0.58	0.66	0.21
1983	0.72	0.54	0.61	-	-	0.15
1984	1.08	-	0.61	0.66	0.48	0.19
1985	0.64	0.64	-	0.68	-	0.17
1986	0.78	0.61	0.73	0.60	-	0.08

Table 48. Mean muscle mercury concentrations of walleye, adjusted by log fork length - log [Hg] analysis of covariance, 1978-86.

Year	Site				
	South Bay	Channel	Camp 9	Area 5	Issett Lake
1978	0.68	-	-	-	1.36
1979	0.38	0.47	0.50	0.56	-
1980	0.57	0.51	0.52	-	-
1981	0.59	0.51	0.47	0.72	-
1982	0.72	0.41	0.45	0.62	0.70
1983	0.51	0.44	0.46	-	0.81
1984	0.60	-	0.38	0.55	0.72
1985	0.61	0.44	-	0.50	0.45
1986	0.47	-	0.35	-	0.95

Table 49. Results of statistical analyses used to test for differences in muscle mercury concentrations over the periods 1975-1986 (pre-and post-impoundment) for whitefish and 1978-1986 (post-impoundment) for whitefish, pike and walleye. * = indicates significance, $p<0.05$; ** = indicates significance, $p<0.01$; ns = indicates not significant, $p\geq0.05$.

Species	Site	Years compared (pre- and post-impoundment)		Analysis of variance (Fdf)		Analysis of covariance
		Pre-	Post-	$\log_{10}$ fork length (x)	$\log_{10}$ [Hg] (y)	(Fdf)
Lake whitefish	South Bay	1975	1979-86	$F_{8,294} = 7.2601^{**}$	$F_{8,294} = 16.1531^{**}$	$F_{8,293} = 11.7634^{**}$
	Channel	1975	1978-83, 1985	$F_{7,237} = 44.5070^{**}$	$F_{7,237} = 15.7431^{**}$	$F_{7,236} = 15.9859^{**}$
	Camp 9	1975	1979-84, 1986	$F_{7,245} = 17.0363^{**}$	$F_{7,245} = 8.3564^{**}$	$F_{7,244} = 6.2785^{**}$
	Area 4	1975	1978-84, 1986	$F_{9,356} = 8.5327^{**}$	$F_{9,356} = 24.0529^{**}$	$F_{9,355} = 23.7728^{**}$
	Area 5	1975	1981-82, 1984	$F_{3,120} = 10.0156^{**}$	$F_{3,120} = 62.1411^{**}$	$F_{3,119} = 45.2217^{**}$
	Issett Lake	1975	1978, 1982-86	$F_{6,222} = 20.6227^{**}$	$F_{6,222} = 29.6811^{**}$	$F_{6,221} = 25.0613^{**}$
	South Bay	-	1979-86	$F_{7,270} = 9.1197^{**}$	$F_{7,270} = 14.8121^{**}$	$F_{7,269} = 10.3943^{**}$
	Channel	-	1978-83, 1985	$F_{6,188} = 40.7062^{**}$	$F_{6,188} = 7.0664^{**}$	$F_{6,187} = 7.4192^{**}$
	Camp 9	-	1979-84, 1986	$F_{6,221} = 21.6990^{**}$	$F_{6,221} = 3.6145^{**}$	$F_{6,220} = 3.4453^{**}$
	Area 4	-	1978-86	$F_{8,332} = 6.3689^{**}$	$F_{8,332} = 21.5215^{**}$	$F_{8,331} = 22.7583^{**}$
	Area 5	-	1981-82, 1984	$F_{2,96} = 2.7988^{ns}$	$F_{2,96} = 5.0649^{**}$	$F_{2,95} = 5.1719^{**}$
	Issett Lake	-	1978, 1982-86	$F_{5,199} = 23.2662^{**}$	$F_{5,199} = 34.2537^{**}$	$F_{5,198} = 30.9182^{**}$
Northern pike	South Bay	-	1978-86	$F_{8,293} = 5.9326^{**}$	$F_{8,293} = 8.3064^{**}$	$F_{8,292} = 9.8525^{**}$
	Channel	-	1979-83, 1985-86	$F_{6,297} = 3.1994^{**}$	$F_{6,297} = 3.7904^{**}$	$F_{6,296} = 4.3820^{**}$
	Camp 9	-	1979-84, 1986	$F_{6,202} = 11.7511^{**}$	$F_{6,202} = 6.5383^{**}$	$F_{6,201} = 2.9561^{**}$
	Area 4	-	1979-82, 1984-86	$F_{6,231} = 5.7857^{**}$	$F_{6,231} = 9.3658^{**}$	$F_{6,230} = 8.4657^{**}$
	Area 5	-	1979, 1981-82, 1984	$F_{3,116} = 8.6150^{**}$	$F_{3,116} = 13.3432^{**}$	$F_{3,116} = 7.6895^{**}$
	Issett Lake	-	1978, 1982-86	$F_{5,169} = 5.6725^{**}$	$F_{5,169} = 3.8082^{**}$	$F_{5,168} = 2.7317^{*}$
Walleye	South Bay	-	1978-86	$F_{8,251} = 4.0221^{**}$	$F_{8,251} = 5.6265^{**}$	$F_{8,258} = 5.1552^{**}$
	Channel	-	1979-83, 1985	$F_{5,187} = 11.6027^{**}$	$F_{5,187} = 2.2421^{ns}$	$F_{5,186} = 1.9863^{ns}$
	Camp 9	-	1979-84, 1986	$F_{6,121} = 3.9065^{**}$	$F_{6,121} = 4.7370^{**}$	$F_{6,120} = 4.3135^{**}$
	Area 4	-	1979-81, 1984		Insufficient data for analyses	
	Area 5	-	1979, 1981-82	$F_{4,108} = 6.4974^{**}$	$F_{4,108} = 2.9932^{*}$	$F_{4,107} = 6.4264^{**}$
	Issett Lake	-	1978, 1982-86	$F_{5,94} = 17.2837^{**}$	$F_{5,94} = 11.3810^{**}$	$F_{5,93} = 5.2013^{**}$

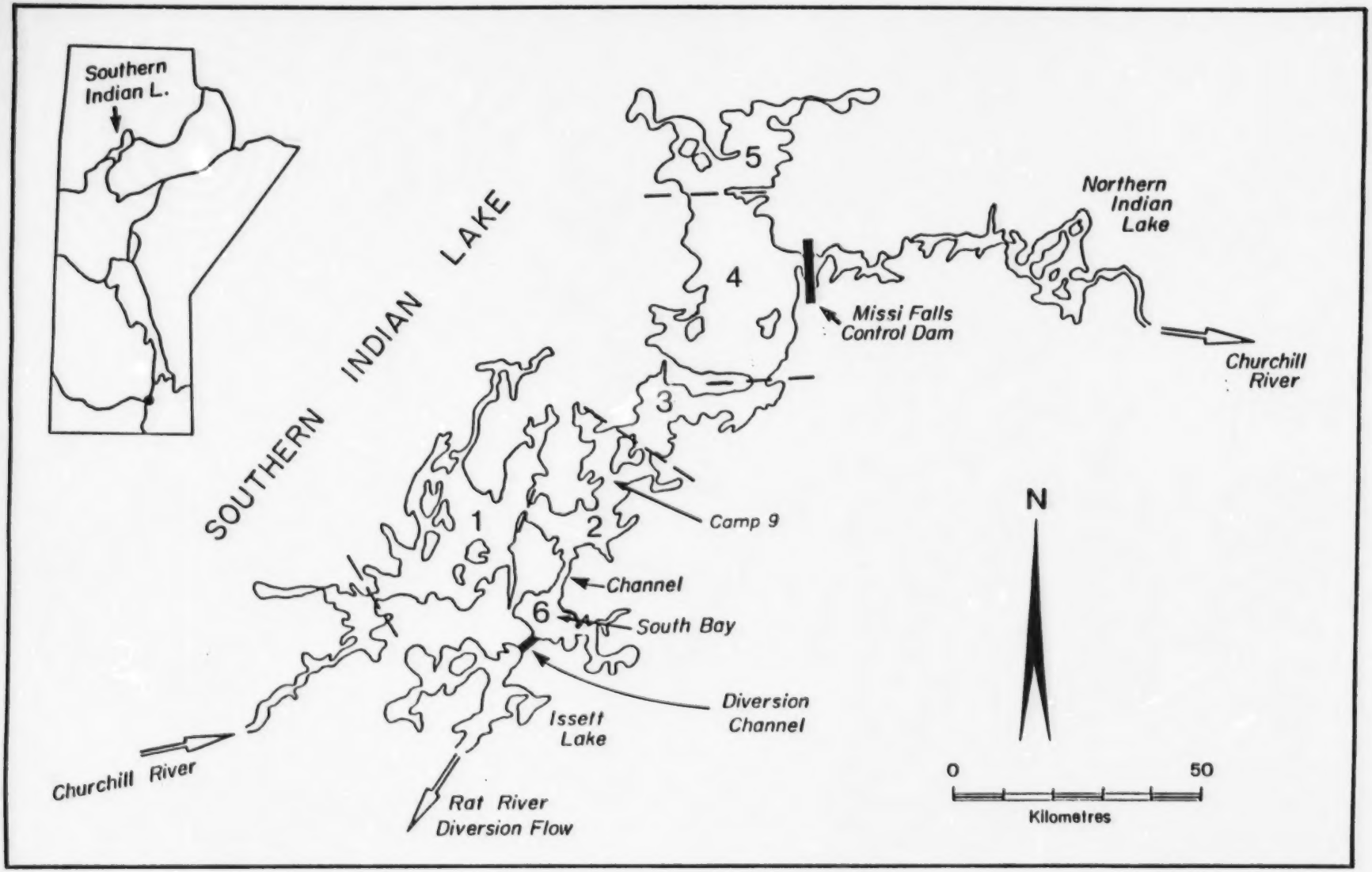

Fig. 1. Map of study area showing sample areas.

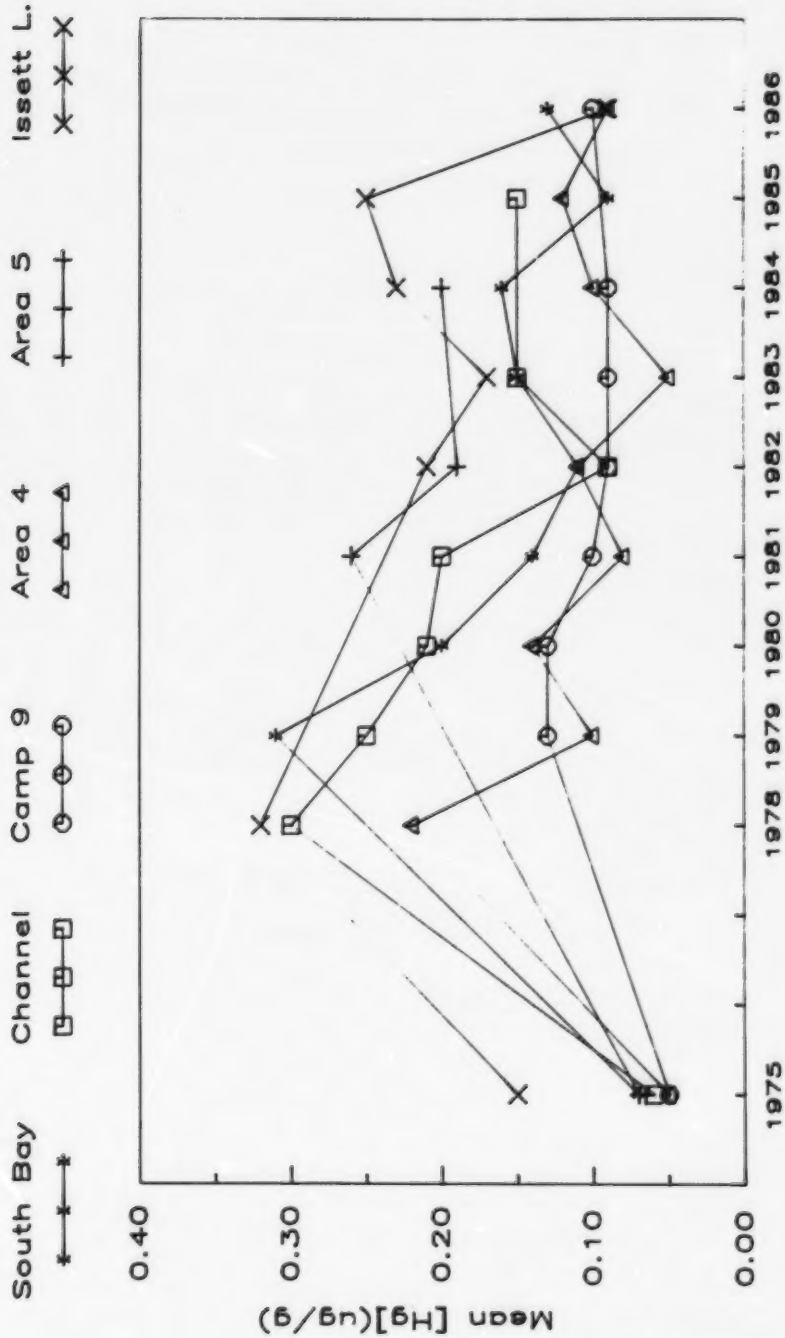

Fig. 2. Mean whitefish muscle mercury concentrations for six sampling sites, 1975-1986.

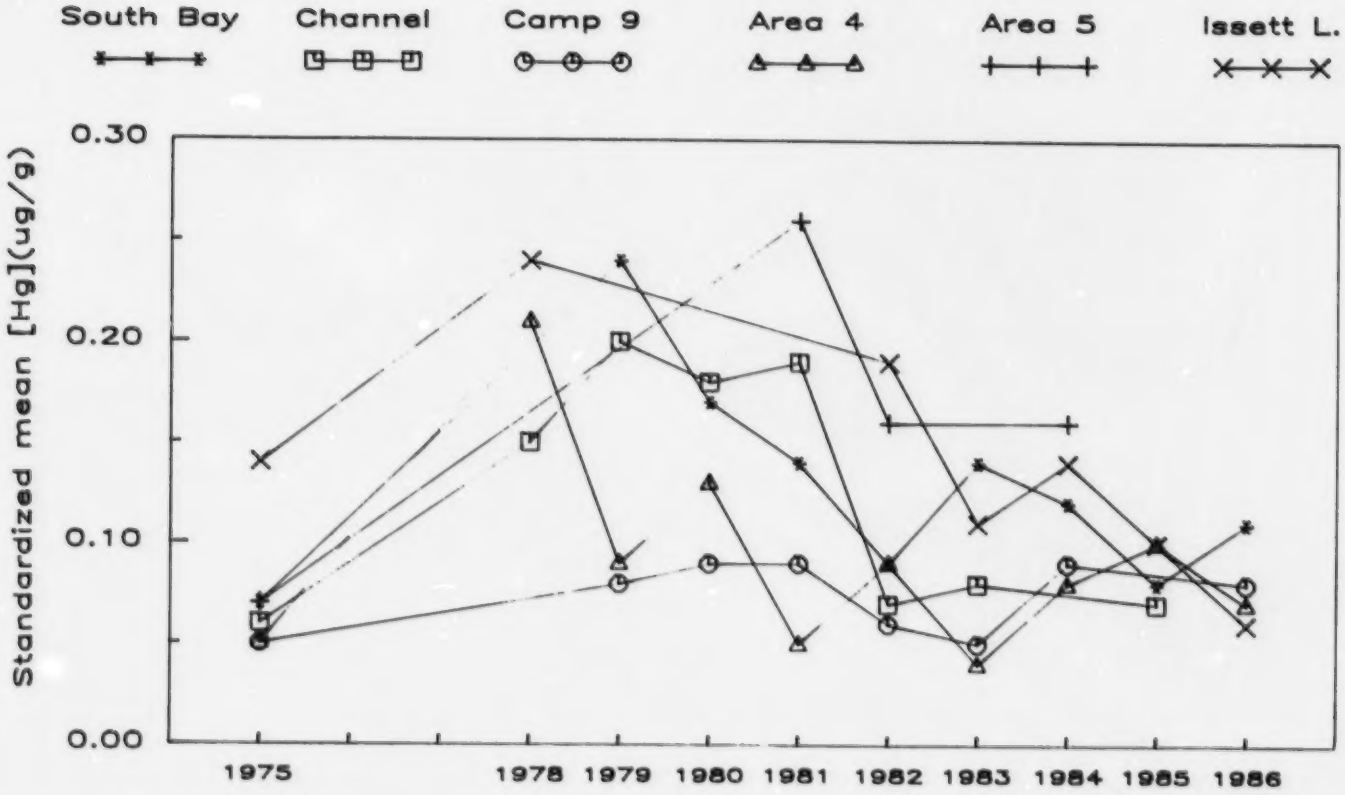

Fig. 3. Mean whitefish muscle mercury concentrations standardized by linear regression to 350 mm fork length for six sampling sites, 1975-1986.

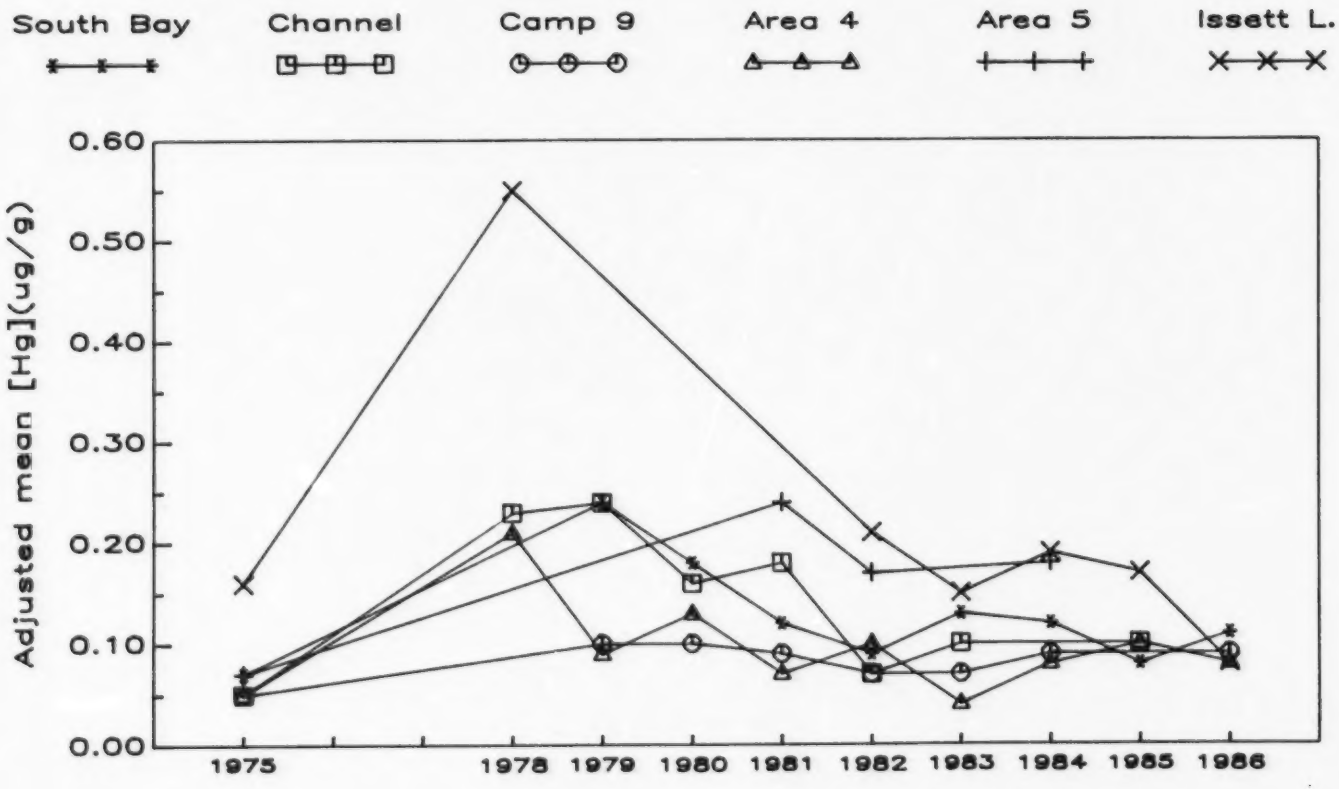

Fig. 4. Mean whitefish muscle mercury concentrations adjusted by analysis of covariance for six sampling sites, 1975-1986.

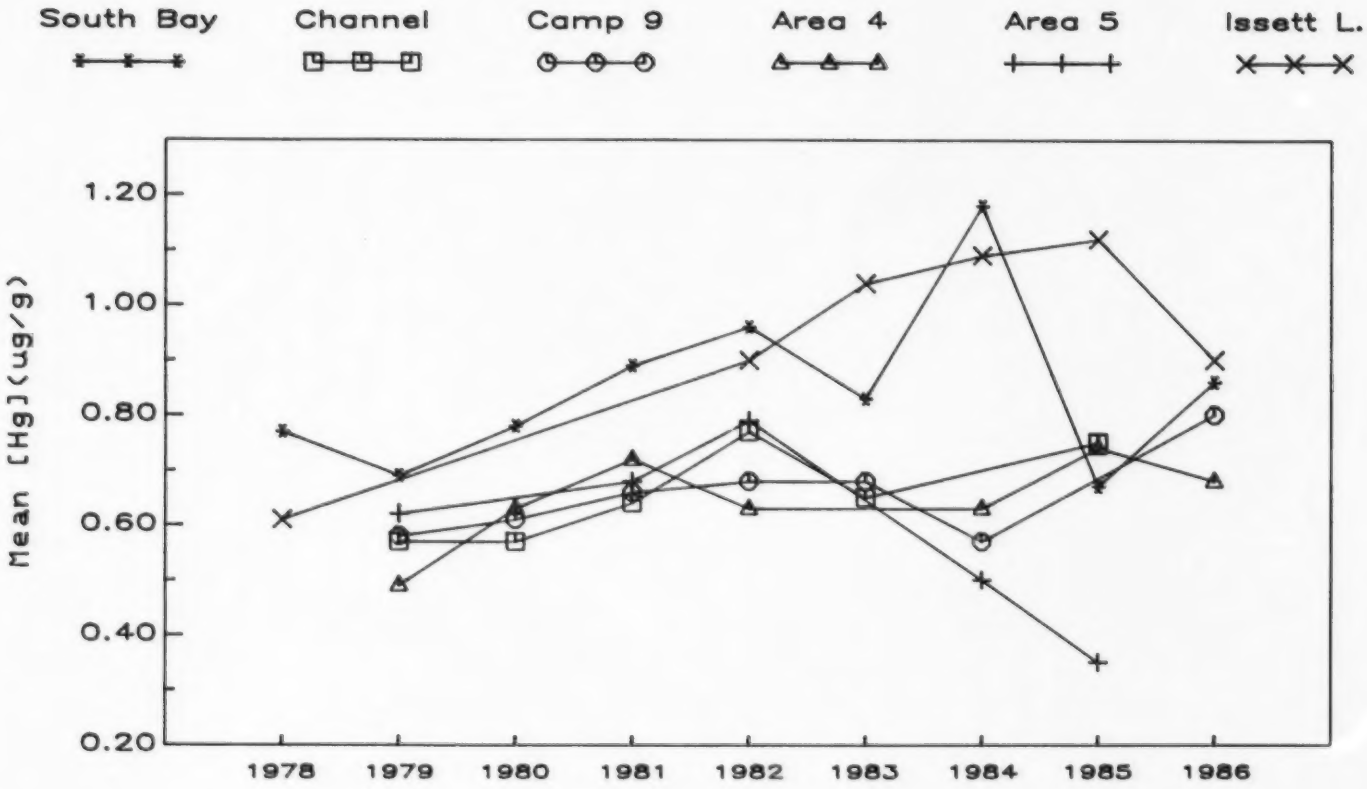

Fig. 5. Mean pike muscle mercury concentrations for six sampling sites, 1978-1986.

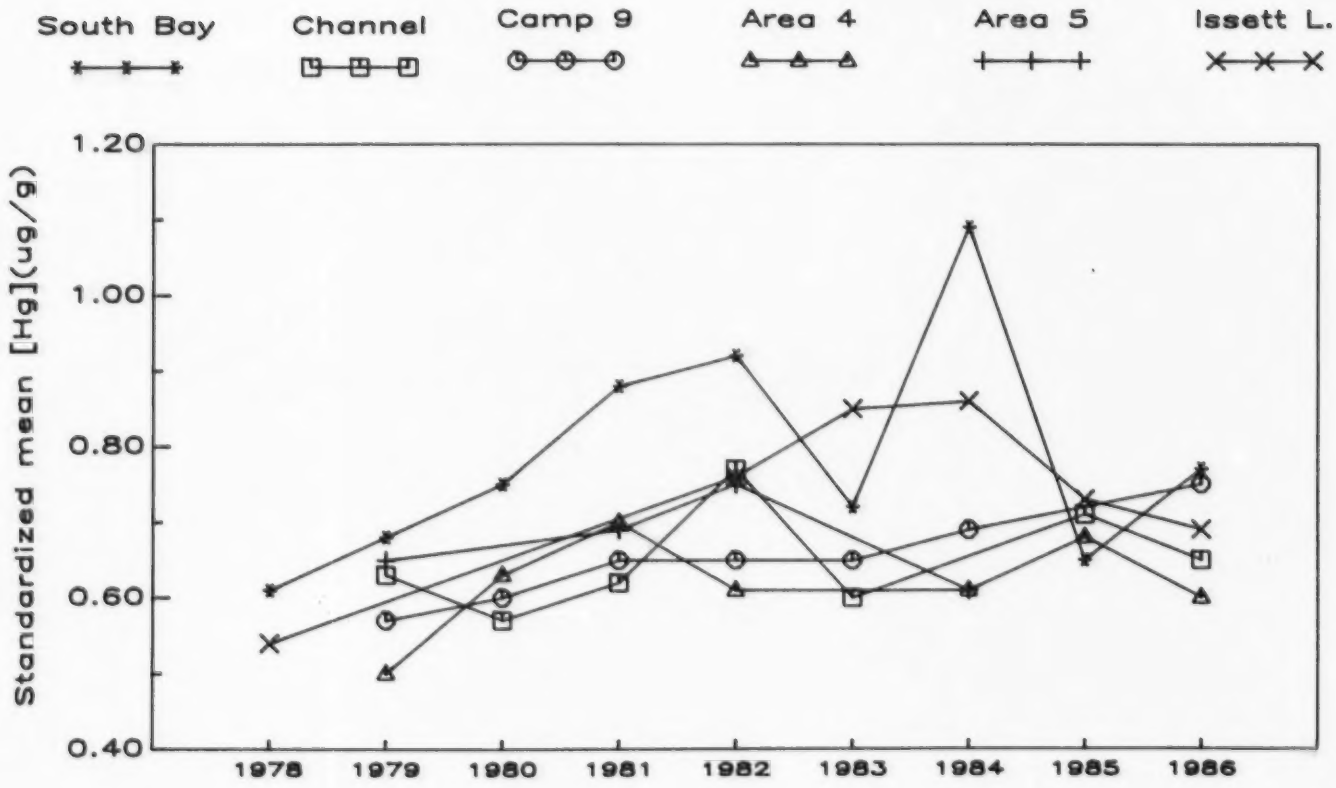

Fig. 6. Mean pike muscle mercury concentrations standardized by linear regression to 550 mm fork length for six sampling sites, 1978-1986.

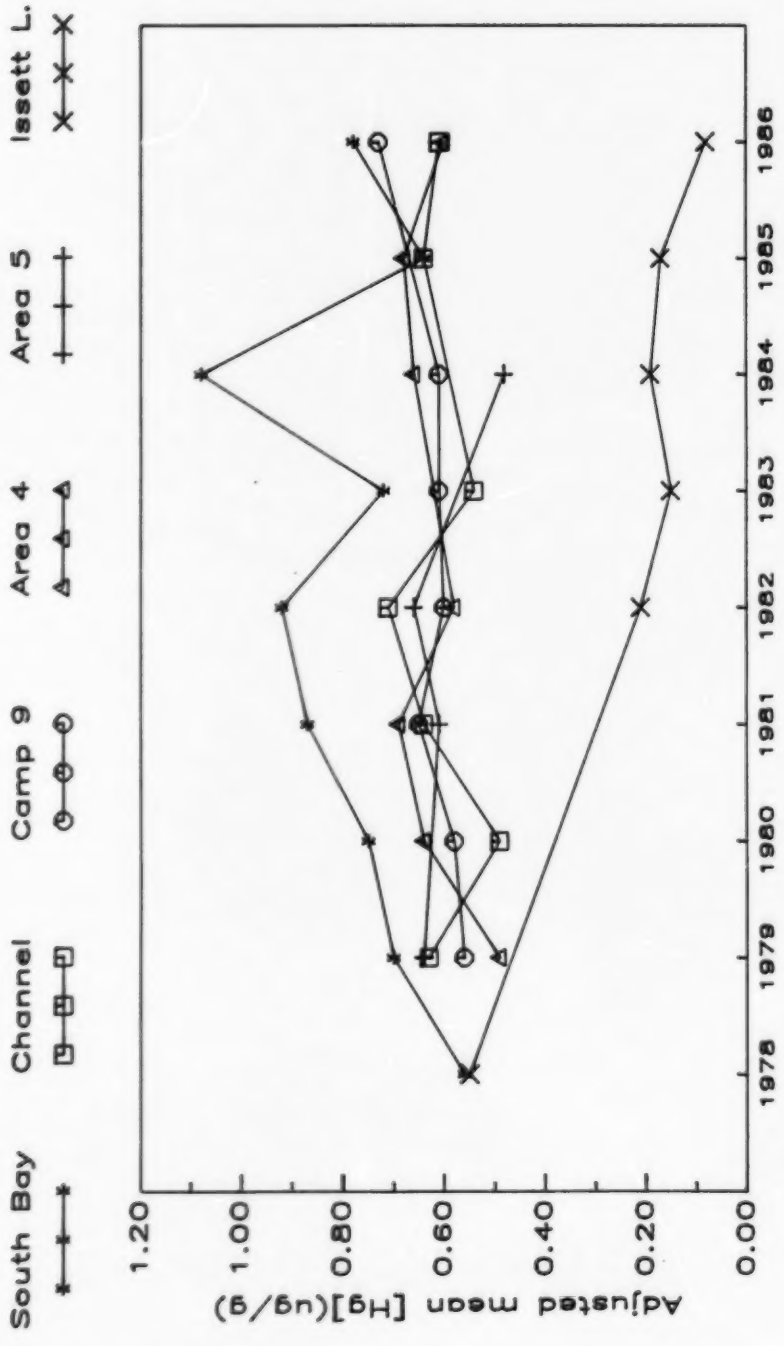

Fig. 7. Mean pike muscle mercury concentrations adjusted by analysis of covariance for six sampling sites, 1978-1986.

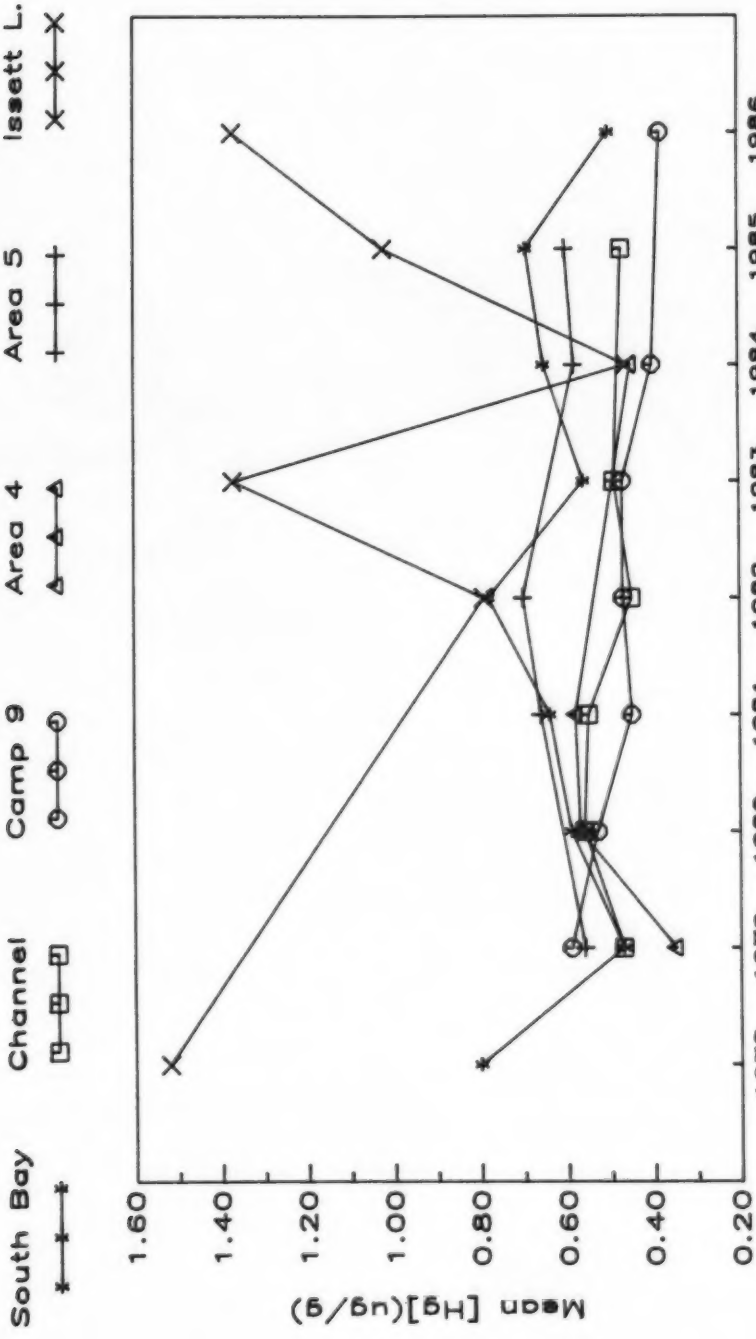

Fig. 8. Mean walleye muscle mercury concentrations for six sampling sites, 1978-1986.

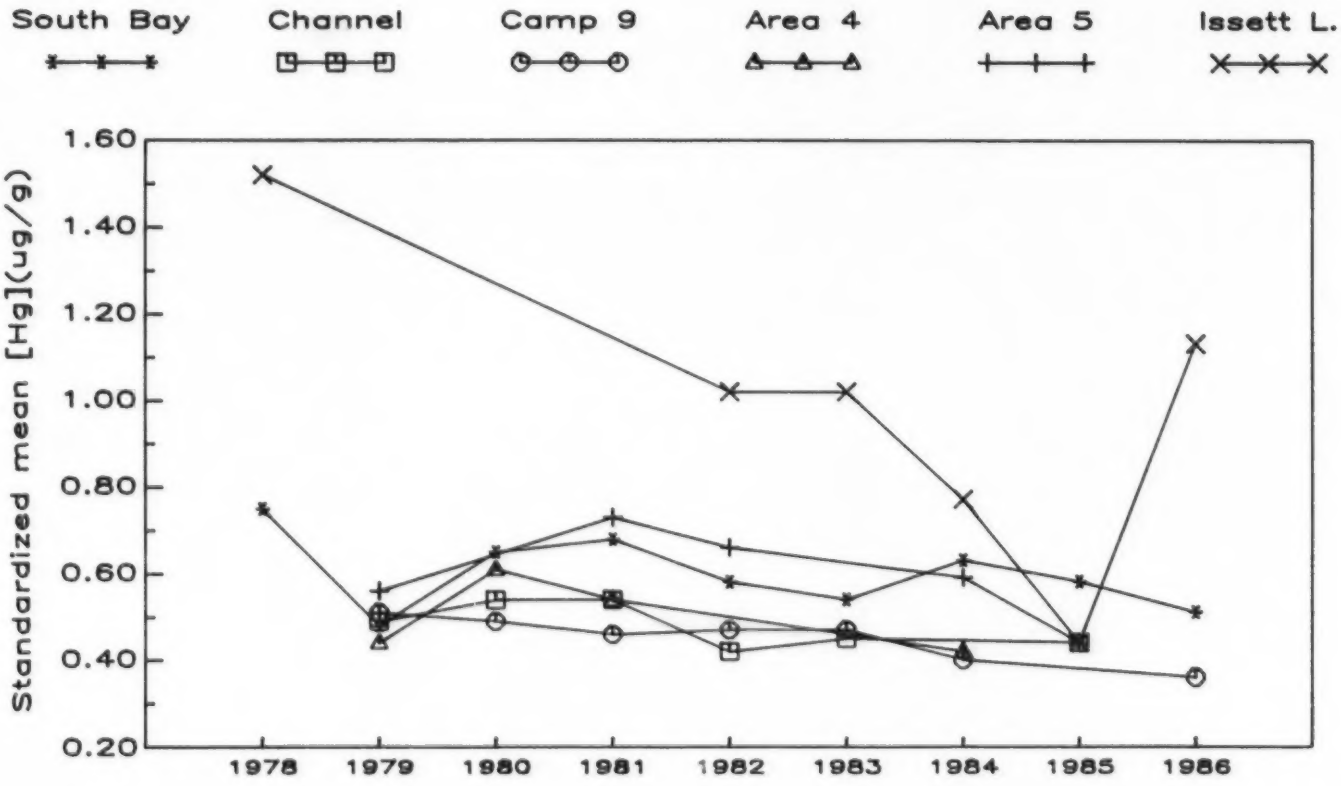

Fig. 9. Mean walleye muscle mercury concentrations standardized by linear regression to 400 mm fork length for six sampling sites, 1978-1986.

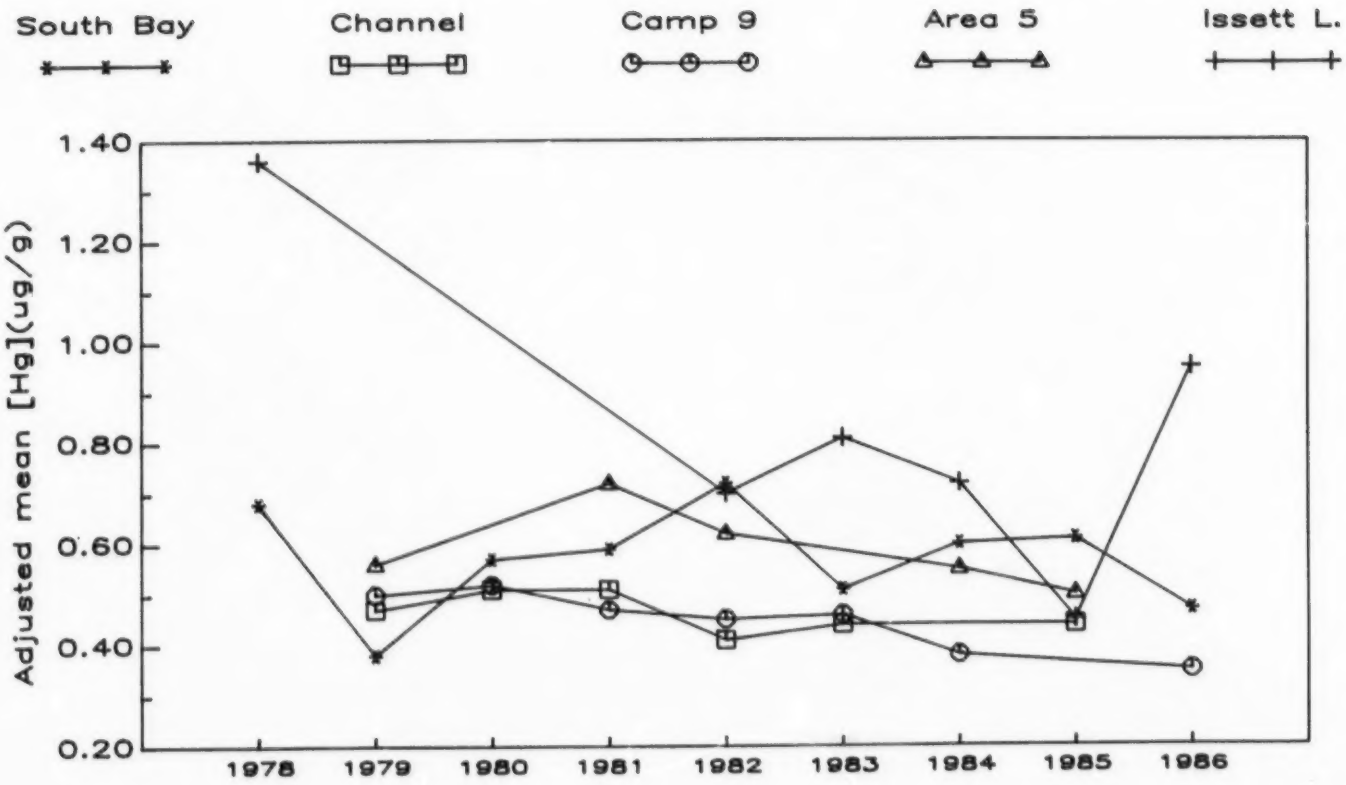

Fig. 10. Mean walleye muscle mercury concentrations adjusted by analysis of covariance for six sampling sites, 1978-1986.